CONTRIBUTIONS TO DERMATOLOGY.

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ECZEMA, IMPETIGO, SCABIES,

ECTHYMA, RUPIA, LUPUS.

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INDEX.

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Eczema.

A DISCREPANCY of views has recently sprung up among dermatologists with regard to the position which this cutaneous affection should occupy. If its elementary type is selected as our guide, its general claims to be considered a vesicular lesion admits of no rational doubt. It is true that the original pimple, in some very mild cases, does not advance to the size and maturity of a perfect vesicle, as exhibited in ordinary examples of eczema. There is an arrest of development, and the eruption simulates lichen. In such instances, it is usually disseminated sparsely along the dorsal aspect of the forearm, on the neck, chest, &c. To the unaided eye of the observer there is perhaps no evidence that it is anything more or less than a true lichen; whereas, if these doubtful specimens are punctured with the point of a needle or lancet, their watery contents will frequently follow the operation, and thus afford ocular demonstration that the eruption is vesicular. But if they yield no serous fluid, they are only exceptional cases, and do not militate against the views of those who consider a vesicle to be the characteristic mark of the primary lesion of the disease under consideration. Occasionally, eczema is complicated by lichen, and hence we have an eczema lichenoides or lichen eczematodes, in which the characters of the two eruptions are blended together—vesicles and papules.

Eczema usually exhibits three different and well-marked stages in its history. The first is that of erythematous inflammation, more or less severe, with the superaddition of vesicles; the second consists in the formation of thin, yellow, superficial incrustations, formed in consequence of the bursting of the vesicles and the drying up of their contents, which occupy the adjacent excoriated and exudative surfaces; in the third, these incrustations disappear, the inflammatory

action subsides, and the affected integument is covered with scales, resembling in character those of ordinary healthy epidermis. All these different stages may be present at the same time on the same person—the eruption commencing in one spot, while in another it has passed through its several phases and nearly disappeared.

Without invalidating the above remark with regard to the different stages of the disease, it may be stated in this connection that individual cases occur which show that the period during which vesicles continue to be developed is extremely variable—sometimes lasting only a day or two, while in other instances it is prolonged by the occasional appearance of a few vesicles throughout the whole course of the eruption.

Eczema in Children.

Although this eruption has the same starting points in the very young and in the adult subject, yet its physiognomy in the former differs somewhat from the features which characterize it in the latter. In the infant, its simplest type commences with small, slightly raised vesicles, sometimes closely crowded together and sometimes isolated. In a few hours, these vesicles become more prominent and transparent, and are free from any well-marked inflammation or redness at their base. In four or five days, more or less, they burst, and a discharge of a serous, limpid fluid is poured out upon the adjacent skin. Anon the discharge becomes turbid and less copious; the ruptured vesicles dry up; and, to an observer not entirely familiar with the natural history of the eruption, it might seem that it was at an end. Instances of this kind do occasionally present themselves, but, in a great majority of cases, the malady is of a much more serious and persistent form. Successive crops of vesicles arise; the adjacent integument is inflamed, and the serous exudation desiccates into yellowish laminæ, which adhere closely to the subjacent tissue. The eruption may be quite circumscribed, and occupy but a very limited portion of skin, as, for instance, the summit of the scalp, or about the ears, the face, the arms, the hands or feet; or it may cover the entire surface of the body and limbs, and maintain its hold upon the little sufferer for several months, with repeated alternations of transitory amendment and relapse, whatever remedial measures may be used for its radical and perfect cure. But although with regard to its obstinacy and chronicity it may not be unlike what we meet with in the adult, yet

the diseased skin of the infant with this complaint never presents that thickened, hard, œdematous, infiltrated, furfuraceous condition so common in chronic eczema in persons of mature life. The most extraordinary examples of the abnormal features here spoken of are to be found in aged people, especially when the morbid action has implanted itself on the lower limbs. These remarkable transformations of the cutaneous membrane, which every physician must often have seen in individuals of advanced age, are but the ulterior expression of the same diathesis which exists in the infant during the period of lactation, and which manifests its initial presence in a superficial group of acuminate vesicles. The contrast is indeed great, and the medical philosopher finds in it a theme for profound study.

Of all the diseases that invade the human skin, eczema constitutes more than one third; and in children the hairy scalp is its most frequent locality. Perhaps, for all practical purposes, it will be sufficient to consider the eruption under two principal varieties or forms, namely, the acute and the chronic. These terms are easily understood; and, by employing them, all danger of confusion, misapprehension and obscurity of language is avoided. It generally makes its first appearance in the young subject at about the fifth or sixth month, that is, the period of the first dentition; sometimes much earlier. It breaks forth without any premonitory symptoms, except, perhaps, a slight itching of the parts. The vesicles burst about the fourth or fifth day of their evolution, and if the scalp is the part implicated, the hairs become agglutinated; and as the semi-opaque secretion from the ruptured vesicles continues to flow over the surface, which soon becomes inflamed and irritated, soft, small incrustations are produced. There is now considerable heat and redness in the parts. The fœtid serosity oozes out almost constantly from beneath the incrustations; and when these are removed the surface is found to be inflamed, and from the open pores, on the site of the ruptured vesicles, the acrid secretions can be plainly seen to escape. The incrustations are reproduced in quick succession. They are irregular in outline, and are sometimes lamellar and imbricated, sometimes thin and soft, sometimes depressed, unequal, smooth, or rugous, and are usually moistened by the viscid secretion to which their formation is due.

Throughout all the active stages of the disease there is violent itching, which is apt to be more intense during the hours usually allotted

to sleep than at any other time. The child scratches itself with a vehemence which it is distressing to witness. It forces its nails into the affected skin and tears off the cuticle in every direction; and, as a consequence, it is no uncommon thing to see the blood and serum trickling down along the lacerations thus produced—and for the time being we have no means of appeasing the irritation and suffering.

It is a singular fact that, notwithstanding the severity of the complaint in children, it is seldom that it produces any permanent modification of the normal structure, such as baldness of the scalp, or cicatrices in other portions of the cutaneous integument; whereas, in the adult, it is not uncommon to meet with alopecia, more or less extensive, as one of the consequences of the disease.

It has long been a popular tradition, and many learned practitioners of the present day entertain the opinion, that, if the serous discharge of eczema is suddenly arrested, the brain or some other vital organ will be endangered and the life of the patient sacrificed. Other physicians reject this theory as being entirely fallacious. We once entertained the latter view of the subject, but as time has given us more extended opportunities for clinical observation, we have found occasion to modify somewhat our former views. If the excrementitious matter of eczema and other exudative eruptions in a young child is profuse, and has continued for some months, and is suddenly arrested, either spontaneously or through remedial measures, the result may be prejudicial to the welfare of the patient; more especially if the scalp is the seat of the eruption. In the adult subject there is little or no danger from a repulsion of the eruption. But with children, in whom a slight disturbing cause is not unfrequently productive of serious mischief, the case is quite otherwise, as clinical facts bear witness. Whoever has had much practical experience in the management of children suffering with the disease under consideration, cannot have failed to observe instances where the exudation has suddenly stopped, and the general condition of the patient has been thereby apparently rendered more uncomfortable and unsatisfactory. Mothers and nurses not unfrequently report that when the eruption has become crustaceous and dries up rapidly, the child seems to lose appetite, is more restless and feverish, and that the normal organic functions are performed with less regularity than when there is a free discharge; and one can hardly resist the conclu-

sion that this discharge seems to act, for the time being, as a safety-valve to the system. The danger produced by the too sudden arrest of the secretion is rendered still more apparent by the fatal cases recorded by different authors. M. Caillault,* an excellent French writer, relates the case of a child two years of age, which suffered for many months from a vesicular eruption "in a very high degree." The health was good, the external aspect, excepting the eruption, was highly satisfactory. Topical applications of the oil of cade were prescribed, with the caution that it should only be applied to a small surface at once, so that the cure might progress gradually. The nurse, in her misplaced zeal, covered with it the whole face and a portion of the scalp. Twenty-four hours after the sudden stoppage of the abundant secretion, the child was attacked with catarrhal pneumonia, so rapid in its progress that nothing could check it. M. Brequet has witnessed an analogous case, in which death supervened from a cerebral affection. Recently there was in one of the wards of the Hospital for Sick Children, under the care of M. Sée, of Paris, a boy six years of age, with a dartrous affection of the face; every time the eruption disappeared, the patient was seized with a violent attack of asthma. Such cases as these are doubtless rare, and we would not by any means attempt to magnify their importance in connection with the subject before us; nevertheless we may find in them, and in other instances of less gravity, sufficient grounds for cautious therapeutic measures in our dealings with the disease in question. Dr. McCall Anderson says:—"I have rarely witnessed any bad effect even from the rapid removal of the disease. That deleterious effects are occasionally witnessed, however, I am quite prepared to allow."—Page 45.

Burgess, in his "Treatise on Eruptions of the Face, Head and Hands," remarks:—"It should be borne in mind that in children particularly, eczema of the face and head is often a salutary discharge, which it is dangerous to heal suddenly."—Page 33.

There exist in science so many facts of this kind, which have been collected by practitioners of every period, and which, consequently, are above any suspicion of preconceived theory, that it is impossible not to admit the relation of cause and effect between the sudden stoppage of the plastic exudation and the production of various dis-

* Diseases of the Skin in Children.

eases which suddenly appear. Moreover, both physiology and pathology can account for facts of this kind.—M. CAILLAULT, p. 57, 2d English Edition.

It is not difficult to discover in the premises a sort of quasi-physiological function which may not be rudely assailed with impunity; we likewise perceive, as we do in measles, scarlatina, urethritis, parotitis, &c., certain relations of equilibrium and bonds of sympathy between different organs and tissues, which, although not always well understood, we know to exist both in health and disease.

In spite of the best treatment that can be adopted, eczema is exceedingly prone to pass into a chronic state, and to be prolonged for many months or even year after year, with only occasional exemptions from any actual manifestations of its presence. Each season of truce is interpreted by the immediate friends of the child as indicative of the final subsidence of the malady; but not many months pass before there is a renewed attack, and a very remarkable morbid condition ensues.

We will assume now that the eruption has become chronic. The observer notices, at a glance, that it presents a variety of aspects; and the several anatomico-pathological elements which appear simultaneously on different parts of the surface offer no little embarrassment to his judgment, as to the appropriate nosological position in which the eruption should be placed; for, taken as a whole, it consists, so to speak, of a heterogeneous multiform character which seems to be unconformable to any exact and classical nomenclature of the dermatologists. For instance, the physician is called for the first time to see a young child which has had for some weeks a cutaneous eruption, commencing with a small circumscribed blotch of pimples, causing but little disturbance at first, but soon augmenting in size, becoming vesicular, itchy, and yielding an ichorous discharge which irritates the neighboring skin, which in turn takes on a similar action; and thus the local disease spreads in all directions. From the account given by the nurse of the development of the disease, it is evident that its primal type was eczema papulosum; but it is seldom that eczema presents the simple attributes here enumerated, or that it can be represented by one single term; and accordingly, in the case supposed, the physician finds that different portions of the skin are occupied by eruptions which are seemingly different as elementary lesions; and it is only by patient study of these

several existing forms or varieties that any embarrassment or confusion of judgment can be cleared up, and that he can be reconciled to the theory and the fact that each one of the different phases of the eruption in the case before him is to be regarded as a true representative of eczema. They simply constitute the several pathological conditions of the skin arising during the progress of the disease; and they fully justify the appellations which the ablest writers on cutaneous pathology have employed, but which to the general practitioner may sometimes appear superfluous and obscure. But let us look at the supposed case before us more minutely. The eruption is general. Its leading feature in one place is extreme redness. This is a specimen of eczema erythematosum. In another portion of the skin, it is raised into little papules as a leading mark. Here the case is an eczema papulosum. In another part of the skin, vesicles constitute the prominent sign or condition, and we have an example of eczema vesiculosum. In still another region, the exudation may be excessive and constitute a leading feature, and then we have an eczema ichorosum. If pustules are scattered here and there within the precincts of the diseased surface, as is very frequently the case, then eczema pustulosum or impetiginodes is the appropriate name. If the morbid action has continued a long time, and a dry, scaly condition of the epiderm is a chief characteristic, then it is an eczema squamosum. When this last named variety is seated on the scalp, the hairs are frequently enclosed in the glossy, thick, silvery scales throughout their whole length, at the same time forming them into little delicate meshes; and this condition led Alibert to compare it to asbestos, and is described by him under the name of *porrigine* amiantacée. Chronicity is one of its most constant and undesirable attributes. It has sometimes been mistaken for pityriasis, and it is by no means always easy to point out the difference. There is, however, a difference. The scales of the former are thicker than those of the latter. They have always been preceded by a more or less humid condition of the scalp; whereas this is not the case with pityriasis, which is a strictly squamous affection from the beginning. The scales in pityriasis are also thinner, drier, and more adherent than those of eczema.

Eczema squamosum usually appears at a later period of childhood than the other varieties; and is in reality but a sequel of some other form of the eruption which has probably existed for a long time.

The different appearances presented by eczema in the course of its development and progress fully justify the names above given to its different forms. They show that the eruption undergoes several metamorphoses, but does not lose its identity; it is still eczema; and the idea that it has changed its character so as to be called with propriety by any other name, as impetigo, porrigo, tinea, psoriasis or pityriasis, is entirely erroneous. It seems unphilosophical to hold that one disease can be converted into another, and yet Wilson leans to this view.

Some dermatologists make still other varieties of eczema, according as it is partially developed in certain situations; so that we have, for instance, eczema capitis, eczema aurium, eczema palpebrarum, eczema pudendi, eczema perinæi, eczema digitorum, eczema inguinum, &c. The foregoing varieties or divisions are appropriate ones, and, by adopting them, we avoid circumlocution. They might be extended still further, but perhaps those already given will suffice.

In some quite severe and obstinate cases, where the child is naturally robust and well cared for, the mucous membrane remains undisturbed; while in other cases the mucous lining of the nose, eyes, mouth, bronchial tubes, and alimentary canal affords unmistakable evidence of participating to a greater or less degree with the cutaneous affection, in the excessive mucous or catarrhal discharges from these parts. The lymphatic cervical and axillary glands are generally swollen, and give rise to chronic adenitis which not unfrequently advances to suppuration. In not a few instances, especially among the poorer classes, where the child is subjected to unfavorable hygienic influences, there is evident malassimilation; the patient becomes anæmic, wastes away, the muscles become soft and flabby, and if the patient possesses a pyogenic diathesis, the deeper portions of the derma are engaged in the morbid processes. A low degree of inflammatory action sets in; and little abscesses form upon some portion of the scalp, about the ears, in the axillæ, and on the hands, fingers, and toes; and the mother is in a state of anxiety, from the groundless apprehension that her offspring is the victim of that much abused malady—the scrofula.

In a majority of cases of infantile eczema, the disease is traceable to hereditary predisposition. It is usually found, upon inquiry, that one or the other of the parents or grandparents has been affected with the complaint. Deficient lactation or bad milk will bring it

out. This fact is not unfrequently illustrated where mothers have a deficiency of nourishment for their children, or foolishly insist upon nursing them for too long a time—some sixteen or twenty months. Dentition is sometimes an exciting cause; so also is vaccination; and physicians are thus wrongfully blamed for using impure matter, because as an occasional, but unavoidable sequel to vaccinia an eczematous eruption supervenes, especially in young children with an excessive lymphatic temperament. The eruption in these cases usually commences near the spot where the vaccine virus was inserted; but at other times at a distance, as on the head, nates, and genitals. The most trivial causes that disturb the normal processes of digestion and assimilation in the young infant are sometimes sufficient to induce the eruption; as, for instance, a chill or a little feverish attack of a day or two, or a sudden fright experienced by the nursing mother.

Mothers and wet nurses, having the care of infants suffering from eczema, often put the question—is it contagious? The attending physician should give a qualified answer. If the eruption, for instance, is on the face or head, and is accompanied for the time being with copious discharge, it is not strange that its irritating qualities should produce a similar eruption on the tender skin of the breast or arm of the nurse in suckling the child; or if she sleeps with it and it nestles up to her, as is usual, she is liable to be affected in like manner. But this liability is to be measured in part, at least, by the susceptibility of the exposed person. Considering the pathological condition of the child, and its relations to the nurse under these circumstances as a source of injury or poison, we are reminded of what may happen when one comes in contact with the poison oak (Rhus toxicodendron). In some individuals of peculiarly delicate skin, it is well known that handling the leaves of this shrub will produce itching, inflammation and vesicular eruptions, similar, although not identical with eczema; while other persons alike exposed do not suffer. In the case of the eczematous child, it is certain that it can and does inoculate itself; and the same acrid discharge, when long or often in contact with the skin of a healthy person, may act as an irritant and produce an eruption. Such instances have transpired within our own knowledge; and it is presumed have been observed by the readers of this communication. And yet, in the ordinary sense of the word, eczema is not contagious.

Treatment of Eczema in Infants and Young Children.

When a physician is called to prescribe for a young child that is suffering from an attack of eczema, he is conscious that so far as relates to constitutional measures but little can be done. Yet that little may be of much importance to the future welfare of the child; and it requires the exercise of the highest medical talent to know just what to do, and what not to do. The disease is apparently purely local, but in reality it is not so. The blood, the nerves and their functions are more or less implicated. The pulmonary apparatus and the intestinal canal may also be in an abnormal state; and although our chief reliance must be in the employment of topical remedies, it is the part of sound discretion to combine with it some general course of treatment as auxiliary. This course should be equally distant from all extremes of practice. In the first place, we should ascertain what is the exact condition of the child; whether the eruption is a sequel of any antecedent malady—as, for instance, scabies, as is sometimes the case; whether it is the result of some existing derangement of the stomach or bowels, or is connected with difficult dentition. If none of these things have induced the complaint, it should probably be considered as hereditary. If the child is robust and hearty, it will be advisable to prescribe an aperient every ten or twelve days, with a view to prevent all danger of transferring the eruption—or, to speak more logically, for the purpose of preventing any vicarious action of the internal organs, while at the same time it will tend to give relief to the morbid condition of the skin. The kind of laxative best suited to the case will be a small quantity of fluid magnesia, or some thirty or forty drops of castor oil in as much lemon syrup, or simple syrup, in the early part of the day. In a child from six to twelve months old, one grain of calomel, with as much refined sugar, may be dropped upon the tongue. By thus producing a little extra activity of the alimentary canal occasionally, we avoid all danger in our attempts to suppress the cutaneous discharge by the cautious employment of suitable astringent applications, even if the eruption has existed a long time and yields an abundant secretion. The effect of the laxative upon the general condition of the child should be carefully observed, and the frequency of its repetition and the period of its continuance be regula-

ted accordingly. It should be borne in mind that eczema, in all its stages and varieties, is an inflammatory affection, and the slight depletion produced by the internal medicines above suggested is a sanitary measure which ought always to be employed for children of a full, gross habit. As regards the mercurial, we know with what remarkable ability they tolerate it, especially if they are endowed with a lymphatic temperament, and we find that children of this temperament are more subject to eczema than others. They seem to possess a more delicate skin. We apply the terms lymphatic temperament, lymphatic constitution, lymphatic predominance, to children who are uncommonly fat and pale, and who, with softness and puffiness of the muscular tissue, together with atony of the general organism, yet exhibit fair health and grow rapidly. We are aware that the word temperament, as applied to young subjects, is less definite and less marked than when we apply it to the adult; and yet we find that the best writers speak of the scrofulous, nervous, and other temperaments of children—and, in our daily professional intercourse, we do the same thing. But, at best, the language is somewhat vague.

In addition to the occasional use of an aperient, it will be good practice to administer to the child the syrup of the iodide of iron. This will be especially called for, if the eczematous fluid continues to flow with unusual obstinacy, and the lymphatic glands are in a hypertrophied condition. The iron will give tone to the system in the most gentle manner, and without disturbing the stomach. The minimum dose to an infant of six to twelve months should be five minims thrice daily. It sometimes proves laxative, but when it does not operate on the bowels it augments the quantity of urine. Its effects should be carefully noted, and the daily quantity gradually increased to twenty-five or thirty minims, unless some circumstance should contra-indicate it. For a child from two to four years old, the usual dose may be from ten to fifteen minims three times a day. If severe pruritus should continue, and render the child feverish and fretful, a moderate looseness of the bowels, occasioned by the iron, will contribute to its relief.

The above pharmaceutical remedies are about all that can be addressed to the constitution, in the earlier period of the eruption, when it breaks out on a strong, robust child; but if it should be feeble, anæmic, and badly nourished, it would be injudicious to resort to the use of mercury, unless the bowels are much constipated, or the pul-

monary organs are in a state of congestion. Under such circumstances, it may be given without hesitation.

At a later period, when the eruption is assuming a chronic form, the question as to the expediency of resorting to some medicinal agent well known for its special therapeutic action on the diseased cutaneous membrane, naturally suggests itself to the medical attendant. We refer here to arsenic. Shall it be given to a young child? We are not ignorant of the dread which the name of this drug often inspires in the mind of a doting mother, for we have often been witness of the fact. We have, nevertheless, in most instances where we have deemed its administration important, succeeded in gaining free consent for its use; and we have often prescribed it for young children not only with impunity, but with marked benefit. But the younger the child, the less its utility and the greater the danger. The conditions under which any form of arsenic should be administered may be summed up substantially thus. The patient should not be under one year old. There should be no functional disturbance of any of the internal organs, no inflammatory condition of the gastro-intestinal or pulmonary mucous membrane; the tongue clean, the digestion normal; no diarrhœa, no scrofulous diathesis apparent; little or no serous exudation from the eruption, but a scaly condition approximating that of pityriasis or psoriasis. Under these circumstances, there can be no rational objection to the employment of arsenic, with a fair prospect that its curative effect will be displayed in a satisfactory manner, and the above are the limits within which its employment in any form or combination should be restricted.

If arsenic is prescribed for young children in combination with a small quantity of iodide of potassium, which will act slightly as a diuretic, any unpleasant effects will be less likely to occur; while at the same time its peculiar action on the skin will be heightened rather than lessened. The subjoined formula will be convenient. ℞. Liquoris potassæ arsenitis, ♏xxxij.; potassii iodidi, ʒi.; syrupi tolutani, ʒi.; aquæ fontanæ, ʒiij. M. Dose.—For a child from one year to two years old, a teaspoonful every morning and evening. For a child from two to four years old, one teaspoonful three times a day. For a child from four to eight, two teaspoonfuls morning and night. For a child from eight to twelve years old, two teaspoonfuls three times a day; to be continued for each patient from three to four weeks. Strict instructions should always be given to the nurse

to watch the child, and if any symptoms of illness appear which can possibly be attributed to the arsenic, then have it omitted for a few days, or have it given every other day only. But it is well known that young children bear the presence of this medicine remarkably well; and we consider it scarcely possible that any evil can result from the cautious method above directed for its use. Wilson prescribes Fowler's solution in doses of two minims to an infant from a month to a year old, repeated three times a day immediately with the meals. He combines it with the wine of iron and syrup of tolu.

The bichloride of mercury has long been used as a remedy for eczema in the London Hospital for Diseases of the Skin. For infants and young children it is much safer than arsenic, and it has proved efficacious in many obstinate cases of this complaint, as well as in other eruptions of a chronic type. The following is a convenient mode of prescribing it. ℞. Hydrargyri bichloridi, gr. i.; syrupi tolutani, ʒ ij.; Aquæ fontanæ, ʒ vi. M. The dose is one teaspoonful each morning to a child from six months to two years old. For a child from two to five years old, the dose may be repeated morning and evening. And where we have any hesitation in regard to the use of arsenic, we can with a good prospect of beneficial results prescribe the bichloride, which may be continued for many months, with only occasional intermissions.

The importance of a suitable diet should not be overlooked. Milk is the proper food under all circumstances, for an infant less than twelve months old. If it cannot live and prosper with that, it must die; and the physician should not fail to ascertain beyond all doubt if the nurse has a full supply of that which is good. The microscope, if at hand, will readily determine its richness, by bringing to view the relative number of nutritive globules, and if there is any deficiency in this particular or any other, then the child should be supplied from a different quarter.

The question is not unfrequently propounded to the physician, can the nourishment derived from a mother who has eczema do injury to her child, who has the same eruption also? In these circumstances, it is wholly presumable that the unfortunate child received its peculiar diathesis from the mother before it was born. Nevertheless, if she continues to supply her offspring with nourishment, the source of original injury to the child is perpetuated, although the mode of com-

munication is changed. Before its birth, the blood was the immediate vehicle that conveyed the morbific element into the organism of the offspring; after birth, the milk, which is eliminated from the blood, is the medium of transmission of the same morbific principle; and in our efforts to relieve or cure the child, we are contending not only with the disease itself, but with a constant repetition of the cause that produced it. Perhaps these views may seem pregnant with the humoral pathology. Be it so; and now let it be asked, would a medical attendant be justified in recommending to a family that a wet nurse known to be full of eczema should have the care of a child and supply it with nourishment from her breast? Although we cannot demonstrate, as we can a problem in mathematics, that milk derived from the source here supposed would do injury to a child, probably no intelligent physician would feel disposed to endorse a wet nurse whose skin was occupied with the eruption in question. Whatever may be our views theoretically, the practice of us all is doubtless the same.

In reference to the diet of those who are afflicted with eczema, but little need be said, for but little can be accomplished in virtue of any prohibitions that may be imposed; accordingly, in addition to the suggestions given above with regard to the nourishment suitable for infants, but a few words need be offered on the general subject. Plain, simple, nutritious food—a fair mixture of animal and vegetable substances, such as constitutes the usual dietary of families that are well to do, is appropriate for the class suffering from the disease in question, or from any other form of cutaneous affection, except the eruptive fevers; and any marked deviation from such a course of living, continued for any length of time, will be fraught with danger, for it will impair the general health. There is no one article of food so comprehensive and so valuable for all persons that are afflicted with eczema as good milk. It is generally conceded by dermatologists that pork and shell fish should be interdicted.

To keep the child perfectly clean, and to have it surrounded by a pure atmosphere, are two cardinal virtues during the entire treatment.

Having marked out and initiated a course of treatment, as far as practicable, for internal medicines, for food, cleanliness, salubrious air, clothing and whatever else may be deemed essential in the domestic arrangements, the next point that should engage the consi-

deration of the physician, is the local treatment. This is a matter, as all experience testifies, of much greater difficulty and embarrassment than the simple plan which is a leading feature in the constitutional measures.

In very many cases where our best efforts are put forth to render good service, we find that we have to do with a most capricious enemy; and that what appeared to be the plain indications of to-day, as to what should be done directly to the eruption, will be contra-indicated to-morrow. Whether we order cold water or warm water, a poultice, a dry powder, a liniment, a lotion, an embrocation, or an ointment, we but too often find that the result is contrary to expectation. All parties are disappointed; and the physician is not a little mortified at his defeat. Very likely that since the last professional visit some slight disturbing cause has been called into action, and thus prevented the anticipated benefit. The nursing mother may have committed some error in diet and induced a derangement of the digestive organs; or she may have had a slight feverish attack, or have been thrown into distress by some sudden calamity, or some abrupt change in the weather, as from heat to cold, from dry to wet, or the reverse. Either of these circumstances may serve as a disturbing cause, and for the time being render the patient worse. Other incidental causes, scarcely appreciable, may give a shock to the whole organism of the little sufferer, and its force be especially displayed upon the diseased skin. Every physician in active practice must have witnessed the things here spoken of.

A great variety of topical remedies are in vogue for the alleviation of the pruritus, with a view at the same time of arresting the further spread and continuance of the eruption; and as it appears more frequently on the head and face in young children than on any other region, we will first consider it on these localities. It is hardly worth while to attempt a description of all the preparations in general use in the local treatment of the disease, or to discuss their relative merits. Those only which are most reliable will be noticed, and the indications for their employment pointed out as far as may be.

If the eruption is on the hairy scalp, and incrustations are present, the first thing to be done is to remove them. When this is accomplished, we can obtain a fair view of the condition of the dis-

eased integument, and not until then. There are several applications that have been favorites among medical men for getting the scalps free from these crusts. One of the most convenient and cleanly is the crystallized carbonate of soda. A solution of this salt, containing one drachm, to twelve ounces of water, should be applied to the crusts by means of soft linen rags, or, what is still better, surgeon's lint, or that used by dentists, over which a cap of thin gutta percha or oiled silk should be secured so as to prevent evaporation. The lint should be thoroughly saturated and be renewed morning and evening, or oftener if need be, so that the parts may be kept constantly wet. If half an ounce of the liquor sodæ chlorinatæ be added to the above solution, it will be an improvement, as it will effectually prevent any unpleasant smell that would otherwise emanate from the eruption. It is well to keep on hand a supply of the chlorinated water, for it will be needed all through the treatment, and should be used about in the proportion just stated whenever the child is to be washed. It is a *sine qua non* that the lint should never be allowed to dry, otherwise the application will do no good.

In the present state of pathological knowledge, the explanation of the curative action of the carbonate of soda solution is hypothetical. But it is evident that it produces an immediate sedative effect upon the diseased surface. It acts of course primarily upon the nervous filaments of the parts. Perhaps it combines with and neutralizes some peculiar acid principle which enters into the composition of the acrid discharge. We have cured many severe cases of eczema in patients of all ages, with whom no topical means have been employed except a solution of carbonate of soda during the whole period of attack. This treatment originated with Bennett, of Edinburgh; and whenever the locality of the disease will allow of its use, we need not hesitate to apply it. On the face and about the ears, neck, and some other localities, it would be somewhat inconvenient to employ it on a young child, on account of the difficulty of keeping the dressings in place. The strength of the solution should be about one drachm to the pint of water, if no incrustrations are to be removed. Its therapeutic influence in allaying the pruritus and inflammation of the skin is very similar to that of the weak solution of potassa fusa (two or three grains to the ounce of water) recommended by Hebra, Anderson, &c.

The benzoated oxide of zinc ointment of Dr. Bell, is a mild astrin-

gent application, and is extremely well suited to certain places that are excoriated and highly inflamed, and on which lotions cannot be advantageously applied constantly, as the ears, the face, the nates, and the genital and anal regions. It may be used with a liberal hand, and be repeated two or three times in the course of the twenty-four hours. It should remain undisturbed, as a permanent covering to the parts for several days in succession. It can of course be used on any portion of integument; and it will generally alleviate the pruritus and lessen the morbid secretion in a satisfactory manner. If applied on the scalp, it may become matted down with the hairs if allowed to accumulate for several days; it will therefore be advisable partially to cleanse the hairs every third or fourth day with the carbonate of soda solution, warm, or with a lather made of white Windsor soap. When this is done, wipe the scalp perfectly dry and apply fresh ointment. The cleansing of the head should be done in the most gentle manner, and with the least possible friction, and a soft linen rag used in the process. We have prescribed the benzoated oxide of zinc ointment in numerous cases in all stages of eczema, and for persons of all ages; and, in a majority of instances, with great relief and comfort to the patients.

In cases of purely local eczema occupying quite a limited portion of integument, as the ears, face, hands, axillæ, &c., and the ichorous discharge very copious, we have often employed with much satisfaction the following ointment. ℞. Plumbi carbonatis, ʒ ij.; cretæ præparatæ, ʒ ss.; unguenti rosæ, ʒ ij. M. Apply this ointment freely to the parts two or three times in the twenty-four hours. It rarely fails to ameliorate the intensity of all the symptoms. It may be prescribed without regard to the age of the patient.

After the incrustations have been removed, and the exposed surface is found to be much inflamed, the subjoined formula will prove valuable as a local application. It may be used with freedom. ℞. Pulveris camphoræ, ℈ iv.; pulveris zinci oxidi, ʒ j.; olei bergamotæ, gtt. xv.; glycerinæ, ʒ iv. M. Signa. Shake the mixture before using it. Our experience in the use of the three last mentioned local remedies has been about the same with each, and they have all seemed to promote convalescence about alike. Either of them is entitled to confidence when employed at the proper time; and we have pointed out the condition of things when the one or the other of them is indicated. In repeating the dressings with either, the

nurse should be instructed not to remove any portion of what has been applied previously, but let it remain undisturbed for four or five days unless it becomes detached and is nearly cast off with the loosened incrustations.

When the disease is decidedly on the decline and there is more or less infiltration and thickening of the skin, a weak solution of the choride of zinc will usually act favorably. ℞. Zinci chloridi, ℈ ss.; aquæ fontanæ, ʒ iv. M. To be painted on the affected parts three or four times a day, with a soft rag attached to a stick.

As a constant application in the circumstances just specified above, we have often witnessed good results from the use of the liquor plumbi mixed with thick cream, in the proportion of one drachm of the former to four or five ounces of the latter. It allays the excessive itching and checks the remaining inflammatory tendency. It should be applied several times in the twenty-four hours on any portion of the skin of infants and other young children. It should be prepared fresh every day, especially in warm weather.

We have occasionally prescribed chloroform as a topical application, in the proportion of one drachm to an ounce of simple ointment. It often alleviates the distressing pruritus. This ointment should be put up in a phial with a wide mouth.

A mixture of equal parts of lime water and linseed oil is another local remedy of decided utility, where the surface has long been the seat of the eruption. The preternatural redness, infiltration and excessive itching will frequently subside, when the diseased skin is protected by this well-known ointment.

We speak from experience.

Eczema in the Adult.

Eczema in the adult presents the same elementary lesions as in the young subject. The same forms or varieties of this disease are met with in persons of all ages, although in those who have arrived at maturity, and more especially in those of advanced years, and where the complaint has acquired a chronic character, the infiltration of the derma is much greater and more persistent than in the young; so, also, are the œdema and the pruritus, together with the thick, dense incrustations or furfuraceous scales which sometimes remain as the relics, so to speak, of a former acute eczematous eruption that was perhaps wholly neglected, or but casually or blindly treated by some

irresponsible individual. There are not a few cases, however, where the malady pursues the uncertain tenor of its way through a long series of years, with only occasional periods of respite, however judicious and protracted the treatment for its cure may have been. Especially is this the case where it affects the lower extremities of the aged.

The leading principles of treatment for all subjects are virtually the same, although the measures to be employed must necessarily vary according to the age of the patient, the temperament, the existing state of health, the extent and severity of the disease, and the region upon which it is developed.

In prescribing constitutional remedies, our first inquiry should be in regard to the condition of the alimentary canal. Throughout the entire administration of medicines, this should be kept in the best possible condition, whether the eruption is acute or chronic. If the bowels are costive, an aperient will be required, and should be repeated as occasion may demand. Small doses of sulphate of magnesia, or liberal draughts of the Congress Spring water, or the compound colocynth pill, will usually accomplish all needful purposes in this particular, especially if the diet be properly attended to. The following prescription is a favorite one with Mr. Milton, Surgeon to St. John's Hospital for Skin Diseases in London: ℞. Extracti hyoscyami, extracti colocynth. comp., āā ℈j.; pil. hydrargyri, sodæ carbonat., āā ℈ss. M. ft. pil. No. xij. Give one or two at night. If the patient is accustomed to the use of tobacco in any form, he should be persuaded to discontinue it.

The tincture of the chloride of iron is one of the best remedies for internal use. It may be prescribed in large doses well diluted, thus: ℞. Tincturæ ferri chloridi, ʒ ij.; syrupi zingiberis, ʒ ij.; aquæ fontanæ, ʒ iv. M. Dose, ʒ ij. three times a day, in half a gill of water. If the pruritus is severe, five drops of the tinctura aconiti radicis may be added to each dose of the iron, with good effect. This is a minimum quantity of the tincture of aconite for an adult. (The tincture made from the root is much stronger than that of the leaves, and the whole name of the one intended should be written in full.)

The liquor ammoniæ acetatis is a valuable remedial agent in all stages of eczema, but especially if there be any feverish habit on the patient. Two drachms mixed with about a gill of mint water, or sweetened water, make an agreeable drink, and may be taken three or four times a day. It acts favorably as a diuretic and diaphoretic,

and thus relieves the hypertrophied condition of the cutaneous tissue. Effervescent draughts will also be useful, particularly in the acute stage of the eruption. The mistura ferri composita, the syrup of the iodide of iron, the citrate of iron and quinine, and cod-liver oil, will be found suitable tonics in a great many cases where the vitality of the general system requires to be invigorated. When the vital functions are in a normal state, and the cutaneous affection is attended with little or no exudation (and this is the fact with a large proportion of cases), then is the opportune moment to commence with some arsenical preparation with every probability of doing good with it. This nerve-tonic should be taken in immediate connection with the food, and should be given with great caution to the adult subject as well as to the young. We have no faith in heroic doses of this mineral. When given thus, we defeat the very object of its administration. The stomach or bowels, or pulmonary organs, are almost certain to be disturbed by its irritant qualities fretting their delicate mucous lining, which soon becomes wholly intolerant of its presence, and we are forced to abandon its use with perhaps no little distrust as to its curative powers in the very case where it would have been most appropriate and useful if employed in small quantities. Mr. Hunt, of London, a successful and learned practical dermatologist, long since advocated the employment of minute doses of arsenic and these only; such as two or three drops of Fowler's solution two or three times a day to an adult. We have frequently followed his suggestions with good results; and we never on any occasion prescribe beyond fifteen drops a day of Fowler's solution to the most robust individual.

There is another formula for the administration of arsenic of still greater potency, and with which we may succeed in curing chronic eczema, especially eczema squamosum, even after having been disappointed in regard to Fowler's solution. In fact, we now in most cases prescribe it for adults instead of the solution. We refer to what is termed the "Asiatic pill"— a combination of arsenious acid with black pepper, in the proportion of one part of the former to about eight of the latter. The formula which we prefer contains equal parts of the pepper and the extract of conium, as we think the last named ingredient gives additional security against any unpleasant griping of the bowels which might possibly be produced by the arsenic. ℞. Acidi arseniosi, grs. vij.; pulveris piperis nigri, extracti

conii, āā ʒ j. M. Divide in pilulas No. c. The dose is one pill every morning directly after breakfast, until the patient has taken fifty pills, afterwards one pill every other morning. Each of these pills contains one fourteenth of a grain of arsenious acid; and when prescribed in the manner directed, they will in very many cases exert a sovereign power over the disease, and thus prove their claim to our confidence when all other remedies have failed.

Local Treatment.

If the scalp is the seat of the eruption, the hair should be cut short, and kept so by the use of the scissors. The solution of the carbonate of soda, as mentioned in our remarks on infantile eczema, may then be applied and continued so long as it gives proof of doing good. In regard to this and the other local applications mentioned, no extended additional remarks need be offered in this place, for these external appliances are equally useful to persons of all ages who are similarly affected. If the eruption has continued for a long period and the scalp presents a brawny or furfuraceous surface, the following liniment can in a majority of cases be used advantageously: ℞. Olei olivæ camphorati, ʒ iij.; olei cadini, ʒ j.; unguenti hydrargyri nitratis, ʒ ss. M. Ft. linimentum. Signa. Shake before using. Two or three drachms of the above may be rubbed into the scalp somewhat briskly with a soft flannel, every night at bed time. Occasionally the diseased integument should be cleansed with the carbonate of soda solution, or with soap and warm water. The liniment will be found well adapted to any portion of the cutaneous membrane under similar circumstances, and where the eruption is quite limited in extent. If spread over a broad surface and followed up for some time, it might induce ptyalism.

What is familiarly known as "Hebra's Tincture" makes a valuable local dressing after the acute inflammation has been subdued, and when the infiltration is but slight. It may be applied twice a day. The formula for this remedy is as follows: R. Saponis mollis, picis, spiritus vini rectificati, āā ʒ j. It is necessary that the patient should wear a cap constantly while using this tincture, lest it should soil or even spoil any article of clothing or bedding that may come in contact with it. For these reasons some patients, especially fastidious females, refuse to use it.

If there is much exudation, thickening and infiltration, and the eczema occupies but a small surface, as the ears, the forehead, the face, hands, fingers, feet, etc., a solution of potassa fusa will prove an important local agent. The strength of the solution should be from half a drachm to a drachm of the caustic to an ounce of water. It should be applied by the medical attendant himself for a few times, at least until the patient learns how to use it. A small bit of rag should be saturated with the liquid and then passed rapidly over the surface. The pain is quite severe for the moment. A little warm water in a wash-bowl should be at hand, and the caustic should be instantly washed off with a soft linen rag. The pain continues but an instant. The part is to be wiped dry, and the benzoated zinc ointment thickly spread on lint should be put on to the surface that has been subjected to the potash. The process should be repeated every third or fourth day. If the eruption covers an extensive surface, a portion of it only should be dealt with in the manner here described, at any one time.

If the infiltration is slight, the aqua potassæ of the Pharmacopœia will answer quite well instead of the potassa fusa. It may be used freely once or twice each day, care being taken to remove any excess by means of warm water, if it produces severe smarting. The strength of the caustic applications may be reduced and employed less frequently, as the infiltration, itching and exudation diminish. They are not well adapted to individuals of nervous temperament, or to persons who are in feeble health or advanced in years.

Hydrocyanic acid in combination with other ingredients, is often beneficial in checking the unbearable itching which is one of the most constant and unmanageable attributes of chronic eczema. The following lotion is among the best. ℞. Acidi hydrocyanici diluti, ʒ j.; olei cadini, ʒ j.; saponis viridis, ʒ ij.; olei rosmarini, ʒ j.; aquæ fontanæ, ʒ vj. M. Signa. Shake before using. To be rubbed over any portion of the skin implicated in the disease, two or three times a day. Another: ℞. Acidi hydrocyanici diluti, ʒ j.; liquoris plumbi, ʒ iij.; glycerinæ, ʒ j.; emulsionis amygdalæ, ʒ vj. Ft. lotio. To be applied freely *pro re nata*.

When the eruption is quite limited in extent, topical applications constitute about all that need or can be done. Constitutional measures are certainly less demanded, and usually less efficacious than they are when the whole or nearly the whole surface is engaged. And

as topical measures in the treatment are to be our chief reliance, they may be more potential than would otherwise be expedient.

The sulphate of zinc in the proportion of four or five grains to the ounce of water, applied with a camel's-hair pencil, will quiet the pruritus and promote the entire restoration of the part. The application may be repeated once or twice daily.

A solution of chloride of zinc, twenty grains to the ounce, is likewise an efficient lotion to small patches of the eruption. Both of these lotions may be used by the patient himself, and any excess may be washed off with warm water.

The cyanuret of mercury is likewise a beneficial application in the inveterate forms of eczema, when purely local and covering but a small area. ℞. Hydrargyri cyanuret, grs. vj.; glycerinæ, ʒ ij.; aquæ destillatæ, ʒ iv. M. Signa. Lotion. To be applied with a camel's-hair brush two or three times daily.

As a local remedy, creosote is entitled to favorable consideration, in many cases of chronic eczema. It is not suited to the eruption if there is serous discharge; but when there is much infiltration, pruritus and hypertrophy, and a scaly condition of the parts, it often acts very favorably. In presenting the claims of this article, we are reminded particularly of several cases of chronic eczema of the scrotum and perineum in which it was employed with the most beneficial results. It assuaged the most tormenting itching almost immediately, and ultimately restored the patients to a perfectly comfortable condition, without resort to any other local measures. The following is a suitable formula. ℞. Creosoti, ʒ j.; unguenti simplicis, ʒ ij. M. To be applied freely twice a day. The scrotum should be protected by a suspensory bag.

Glycerine makes a convenient vehicle also with which to combine the creosote, thus: ℞. Creosoti, ʒ j.; glycerinæ, ʒ ij. M. To be used like the preceding.

Eczema of the eyelids (eczema tarsi, ophthalmia tarsi, tinea ciliorum, psoriasis tarsi) is often met with in children and adults. The affection is apt to be regarded as evidence of a scrofulous diathesis, but without good reason. It is simply a local variety of eczema, and undergoes the same changes here as in other localities, viz., inflammation, itching, thickening of the lids—that is, infiltration. Not unfrequently, minute pustules arise and form (eczema impetiginodes of some writers) incrustations or delicate scales, which impart to

this variety of eczema some of the features of pityriasis or psoriasis. But the disease should, amid all these phases, be recognized as an eczema. And it will generally be found associated with some other form of the same eruption in a distant or adjacent region. Chronicity is one of the most common attributes of this local affection. The hair follicles and tarsal glands become involved, and there is more or less weeping from the lids of an ichorous discharge, which chafes and inflames the surface over which it flows, and thus the cheeks in time take on a similar action.

The treatment is simple. At almost any period of the eruption, the following local application will be appropriate:—℞. Hydrargyri oxidi rubri, gr. ij.; glycerinæ, gtt. ij.; unguenti rosæ, ʒ ij. M. A portion equal to a pin's head may be placed between the lids, at the outer canthus, at night, or every other night, and care taken not to let it get upon the eyeball. A camel's hair pencil should be used.

If a collyrium is desired, a weak solution of the chloride of zinc will be appropriate. ℞. Zinci chloridi, gr. i.; aquæ rosæ, ʒ iv. M. Two or three drops of this lotion are to be applied to the diseased lids twice daily with a camel's hair pencil.

Eczema of the lips is often met with. It is sometimes confined entirely to these parts; but, in most cases, the eruption exists on other portions of integument simultaneously. Not unfrequently, it is associated with eczema of the anus. Sometimes these two distant regions seem to act in sympathy, and take turns in relieving each other of the existing trouble, so that when one part is involved the other is free. This metastasis or migration of the disease from one extreme to the other of the alimentary canal may be kept up for a long period.

Nearly all the forms of the eruption may break out on the lips, and become a source of much annoyance and actual suffering to the individual. The lips swell, inflame, bleed, crack, discharge a serous fluid more or less abundantly, and are often disfigured by deep and ugly-looking fissures, which refuse to heal for months or even years. The patient can neither eat, drink, speak, or smile without pain.

The treatment for this local affection must necessarily be simple. If there is much thickening of the lips, it will be proper to touch them a few times with the aqua potassa or the potassa fusa, about one half drachm to the ounce of water, every fourth day. After the application of the caustic, the parts should be liberally coated

with the following cerate. ℞. Pure olive oil, one ounce; yellow beeswax, half a drachm. Direct the apothecary to melt the beeswax in the oil in a sand- or water-bath, and, when melted, stir in new honey one drachm, pulverized oxide of zinc half a drachm, and keep stirring till cool. After thoroughly removing the potash with warm water, and wiping the lips dry, the cerate should be applied, and should be renewed two or three times in the twenty-four hours. This cerate makes a very soothing application for sore nipples, in most instances; sore nipples being usually nothing more nor less than a variety of eczema. The eruption occurs usually in connection with lactation, and occasionally produces inflammation of the deeper parts, giving rise to mammary abscess. The cerate is also a suitable application in most cases of eczema of the external auditory passage (Eczema meatus).

In eczema of the legs (eczema crurale) the medical attendant has generally to contend not only with the fitful character of the disease, but also with the usual habits of the patient, whether male or female. This remark is applicable, at least, to nearly all patients in private practice. In hospital practice the physician can have his own way. Now one of the most important items in the treatment of the disease in question, when seated on the lower extremities, is to have the patient confined to the bed. A surgeon might as well expect a fractured leg to get well while the patient is allowed to hobble about with it, as the dermatologist to hope that a severe case of eczema of the legs will be cured while the individual is suffered to roam abroad wherever he pleases. In almost every populous community, scores of eczematous legs are carried about, because the owners thereof cannot be induced to submit to quiet rest and a horizontal position. So long as the limb is in a dependent state the capillary circulation is impeded and congestion is consequently the result, and the most assiduous professional efforts are well nigh without benefit. The patient generally gets uneasy and dissatisfied if not cured immediately, and neither gives thanks nor credit to his physician for his services, but strays away to some one else.

In the treatment of eczema of the legs, therefore, it is the duty of the surgeon to state to the patient, in explicit terms, the paramount importance of rest in a recumbent position until convalescence is well established. We are led to dwell upon this point with the more emphasis, because failures not a few occur in the practice of

every medical man, in cases where the benefit of repose in a proper position has been ignored by the patient; and where he thus deals unfairly towards his medical adviser, the latter is often under strong temptation to abandon the case.

Eczema of the lower extremities is met with more frequently than on any other region, and it is much more unmanageable than when developed elsewhere. In some instances where varicose veins coexist, or where the patient is quite in years, the eruption is apt to degenerate into chronic ulcers of vast extent, and the whole limb swells to an enormous size, and feels to the touch almost as hard and solid as marble. Under such circumstances, all efforts at cure avail little or nothing. The patient is doomed to a life of suffering.

When it is desirable to correct the offensive discharge arising from old ulcers of the legs which are frequently met with in chronic eczema of these parts, a solution of the nitrate of lead, in the proportion of eight ounces to half a gallon of water, will be a convenient agent for the purpose. Rags or bandages saturated with the solution may be employed in the dressings and kept wet with it more or less as the case may require. By this procedure the patient will be relieved of a very great annoyance, and the apartment rendered comparatively free from any fetid smell. The sores may also be washed with the solution morning and evening if necessary.

The employment of most of the local measures, already sufficiently alluded to, will be equally proper in eczema of the legs. To remove the incrustations nothing can surpass the solution of the carbonate of soda, which exerts also a soothing influence and quiets the most urgent pruritus, in all ordinary cases. If pieces of surgeon's lint are saturated with it and laid smoothly on the part, the moisture can be retained by means of oiled silk or thin gutta percha for several hours, and the patient can repeat the solution at pleasure.

Should it be thought advisable to rely on the benzoated oxide of zinc ointment, or the mixture of the oxide of zinc with glycerine and camphor, a thick coating of either can be used and repeated two or three times a day without disturbing what has been previously put on. If the limb is swollen or if the eruption is complicated with a varicose condition of the veins, the use of a bandage is to be recommended. It should be narrow, and smoothly adjusted, commencing with the foot. It should be re-adjusted two or three times a day, if necessary, so as to keep up equable pressure.

These measures will suffice, when the eruption is of quite limited extent and the infiltration moderate; but if a large surface is involved and the disease chronic, with great infiltration, then it will be advisable to employ the *schmierseife* or German soap—sapo viridis; or the common sapo mollis, such as the washerwomen of the country ordinarily use. The two articles just named are essentially alike in their composition and in their caustic action on the skin, and it is immaterial which is selected. When there is but little infiltration, a rubbing with the soap once or twice a day is sufficient; but when the infiltration is more considerable, a more frequent application is necessary. When the skin has been thoroughly rubbed with the soap, the surface should be washed, and cold water dressing applied until the next rubbing. This procedure must be continued as long as the moisture and itching and infiltration continue, and until the frictions no longer give rise to heat and excoriations of the skin. The soap must then be replaced by cold applications, and the treatment terminated by other local measures. This treatment is identical in its effects with that recommended by Hebra.

If the eruption becomes chronic, and is a variety of eczema squamosum, equal parts of tar, cod-liver oil and glycerine make a suitable dressing. The Norwegian tar-soap (black variety) is likewise a very valuable preparation for topical use in eczema squamosum. It may be rubbed on the parts very briskly, two or three times in the twenty-four hours, with a piece of flannel, and then washed off, and the surface may then be protected by the last-mentioned dressing. Or, the soap may be allowed to remain on for one, two, or three hours at a time, unless it produces too much irritation.

Eczema Mercuriale.—This variety of eczema is entitled to a brief notice, though of rare occurrence. In most instances, women of a peculiar idiosyncrasy are the subjects of it. In the application of the emplastrum ammoniaci cum hydrargyri as a discutient in enlarged glands, swelling of the joints, chronic hepatitis, &c., the mercury is absorbed in sufficient quantity to produce the complaint, and sometimes a very small quantity of a mercurial preparation taken internally will produce it. The vesicles are exceedingly minute, and are developed upon an intensely inflamed ground. There is great heat, in severe cases, accompanied with a smarting and burning sensation and itching. The surface soon becomes of a dusky-red hue. In very bad

cases, the entire surface of the body and limbs is involved. The face becomes enormously swollen, the eyes are completely buried in the tumefaction of the lids, so that the patient is blind for several days, and the ears are greatly swollen and distorted in consequence of the infiltration of serous fluid into their substance. The integument of the pudendal region is involved to a most distressing degree. The parts are much inflamed and hypertrophied. The inflammation extends to the mucous membrane of the vagina, producing the most intense suffering, especially in micturition, and in the course of four or five days a copious discharge of serous fluid escapes from these parts. The mucous membrane of the mouth, fauces, throat and bronchial tubes participates in the affection, and salivation is induced and continues with more or less severity for several weeks. Meanwhile, the vesicles on the skin burst and pour out an abundant ichorous fluid, the odor of which has been compared to that of putrid fish. The entire apartment occupied by the patient is filled with the nauseous effluvia arising from the offensive discharge. In severe cases, the constitutional symptoms run high, the tongue is coated with a white fur, and there is nausea, fever, pains in the head, delirium, and sleeplessness. In eight or ten days from the outbreak of the eruption, the cuticle begins to fall off in large flakes, and the severity of all the symptoms begins to abate. The exfoliation of the epidermis takes place several times, and the surface thus denuded of its natural covering presents quite a unique appearance, as the large flakes of the cuticle hang loose from various parts of the body and limbs. Sometimes the exposed derma is excoriated and bleeds at many points, and the patient in consequence suffers intensely. The disease is very apt to return. In mild cases, only a limited portion of integument is disturbed by the eruption, and no constitutional symptoms are developed; and in a few days the eruption entirely disappears, without any occasion for medical treatment worth naming. We have seen three cases of eczema mercuriale. The patients were all young females.

Treatment.

Tonics, moderate doses of liquor ammoniæ acetatis, orangeade, demulcent drinks internally; and externally, equal parts of lime water and linseed oil, glycerine somewhat diluted with water, warm baths daily, with about three ounces of the carbonate of soda to twenty-five or thirty gallons of water, and the bran bath.

If the mucous membrane of the labia or vagina is much inflamed, a weak solution of the liquor sodæ chlorinatæ, one part to twenty-four of water, should be injected several times a day, and the labia kept apart by means of lint saturated with the solution.

Impetigo.

This eruption consists of small pustules; whereas ecthyma and rupia give rise to much larger ones. In both of the last named affections the pustules are at length covered with more or less conical incrustations or scabs. Those of rupia resemble the limpet shell: while those of ecthyma are less regular in their formation, and are without the concentric markings of rupia.

Impetigo, like eczema, is very frequently developed in early life. Indeed it is met with in infants and young children oftener than in persons who have reached a mature age. Like eczema, also, its characteristic features in the young differ from those which it exhibits in the adult. But unlike eczema it is usually quite amenable to a judicious course of treatment. It seems fit that our study of the affection should commence with it as seen in that class of subjects which are first and most frequently attacked. The inflammatory action which gives rise to a particle of yellow pus upon the surface of the derma arises from a deeper portion of its structure than the inflammation which produces the transparent vesicle of eczema. This globule of pus elevates the epiderma very slightly, and thus a flattened pustule is formed. The fluid is pus from the beginning. The pustules of impetigo are minute, distinct or formed into clusters, which burst in three or four days from their development and pour out their contents upon the surface, and become covered with thick, laminated or prominent incrustations.

The disease may appear on any part of the body, but its favorite and most frequent localities are the scalp and the face. This is the case particularly as regards young children. At the commencement of the disease the first abnormal condition consists of unusual redness, tension and thickening and pruritus of the skin where the pustules are about to be developed. These are acuminated, of a light

yellowish color, hard, with scarcely any inflammatory areola at the base; they are usually formed into clusters or groups, at other times are sparsely disseminated, being at a distance of half an inch or an inch apart (impetigo sparsa of authors). These pustules were denominated psydracious by Willan; and nearly all dermatologists since his day have adopted this name. When the scalp is the seat of the eruption, the occipital and vertical portions are usually the only parts invaded, while the forehead and face remain intact. When the pustules are ruptured and their contents exude, incrustations or scabs are immediately formed of irregular outlines, of a light brown color, with frequently a tint of green. They often break very readily into granular masses of unequal size, and are compared by Alibert to the seeds of certain plants, to broken mortar, or to plaster detached from a wall which has become dirty by moisture and dust. The purulent matter in the process of desiccation seems to pass into a state approaching crystallization, and sometimes the crusts assume an appearance like gypsum; hence Alibert styled them lapidescent. The exudation is exceedingly unpleasant so long as it continues in a fluid state, but the peculiar odor passes off as the secretion dries. In some instances the scabs become the hiding place of numerous animal parasites, which with their constantly increasing progeny prove a source of no slight torment to the child; and the utmost care and cleanliness are required to maintain a decent and bearable condition of the little sufferer. The hair is matted together unless it is properly attended to, and in some cases there is partial alopecia, which, however, is but a mere temporary baldness, and very different from that which takes place in favus and ringworm. The matrices of the hair are not destroyed. They are merely inflamed, and a new crop of hair springs up in a few months, the same as if the parts were never affected. In some instances, the subcutaneous cellular tisue becomes inflamed, and small abscesses form which require to be opened. The foregoing remarks apply more particularly to that variety of impetigo termed by dermatologists, *Impetigo figurata*, and which is more frequently met with on the scalps of young children than the other variety, denominated *Impetigo sparsa*, which will be noticed presently.

The disease has sometimes been mistaken for favus; but the cup-shaped appearance of the crusts in the latter disease is always wanting in impetigo capitis. Hardy classes impetigo with eczema

as a sub-division; but we choose to consider it as a distinct affection, although we are free to admit that it is often a result of eczema and has many features in common with it.

If the discharge continues for a long time unchecked and the affection becomes chronic, the incrustations undergo considerable change; and instead of being thin, soft, and yellow, they become thick, hard, dry and brownish and are tinged with particles of blood, are very adherent, and can only be removed by the application of emollient poultices, fomentations or strong alkaline solutions; and when they are detached the secretion, from which they are formed, is found to proceed from numerous points on the surface of the inflamed and denuded corium. The parts in the immediate neighborhood of the crusts continue red, inflamed, shining and tender, and bear traces of the morbid action for several weeks or even months after the formation of the scabs has ceased; although the eruption seldom leaves any permanent scars or other disfigurement. The constitutional disturbance is rarely of much account, and is merely symptomatic of defective nutrition.

Impetigo Sparsa.

This variety or form of the disease is not so common as impetigo figurata. It is characterized by the development of small, solitary, irregular pustules on different parts of the scalp, and is met with more frequently in children than in adults. In the latter it is a rare disease. Successive pustules appear, attended by itching and heat in the parts. The amount of the incrustation or scabbing depends on the extent of the secretion. It may be thin and yellow, soft or hard. Its character is influenced a good deal by time. In the early period of its formation and when developed on quite young children at the breast, it is soft and moist; hence the terms of crusta lactea, porrigo larvalis, &c., of the older dermatologists. There is at times much local irritation, and if nothing effectual is done to check the progress of the abnormal action, it will run on indefinitely and the exudation will furnish new supplies for the augmentation of the scabs in size and thickness; and as the disease acquires age, it will increase in obstinacy. The characteristic symptoms of the affection are of course more fully pronounced, more disgusting and more difficult to subdue in children who have been neglected, and in whom it is allowed to continue without any attempts to check it,

than they are in patients that are well cared for and kept in a cleanly condition. In the latter, the disease is generally mild in its features and exempt from those disagreeable accompaniments so often encountered among the children of poverty, filth and privation; and when appropriate means are employed it can usually be cured in a few months. When it is seated on the hairy scalp of infants, its duration and the sufferings induced by it are not, *cetæris paribus*, so tedious as when developed in the adult and occupying the arms or legs. In the last named situation it is seen oftener than on any other region, and it is here that it is especially formidable. In very rare and exceptional cases, when the eruption is seated on the scalp, the inflammation extends through the whole thickness of the integument, and indolent ulcers are produced in spite of all efforts to arrest its progress. The lymphatic glands of the neck also become enlarged and painful, when the complaint assumes its worst form, and constitutional symptoms of considerable severity are induced.

Impetigo of the Face.

On the face, as well as in the scalp, the eruption presents various degrees of severity, being in some cases so mild as to require but temporary medical treatment, while in others it passes to an opposite extreme, and becomes chronic and troublesome for several months. It rarely attacks a child before the tenth or twelfth month, or even a little later. If neglected, it is apt to spread over quite a portion of the face; and the cheeks, the forehead, nose and chin are sometimes buried in a mass of incrustation, and the poor child is a piteous object to behold. Under these circumstances, the malady bears a strong resemblance to a case of confluent smallpox. The child suffers considerably at times from pruritus, the nails are applied to various points, and thus lacerations are produced and the disease thereby aggravated, as in eczema.

In mild cases the eruption commences on a small disc, and if it remains circumscribed for some time, the incrustation gradually increases in thickness and presents a rough, uneven and dark-brown surface, which projects from the base not unlike a crust of rupia. Sometimes the disease is located about the commissures of the lips, and gives rise to small persistent sores; at other times it is seen occupying the alæ nasi, where it forms quite large deposits of crustaceous matter, which partially closes up the apertures and mate-

rially interferes with respiration, and the child is forced to breathe with its mouth wide open. The morbid action extends gradually to the cheeks on either side, and also upon the upper lip, which becomes much swollen, and there is great distortion of the features, giving to the countenance a most repulsive appearance. Occasionally it commences in the eyebrows, both of which are generally affected, and when situated in the latter region it may spread upon the forehead or eyelids and produce ophthalmia or a loss of the eyelashes. In nearly all cases as seen in young children, the head and face are the only regions attacked; we will therefore now pass to the consideration of the complaint as it is developed in the adult.

In persons of adult age impetigo very seldom appears on the scalp, but when it does, the matting of the hair renders it a more troublesome affection than when it occurs in young children. In the former class of subjects the inflammation is apt to be more acute and profound than in the latter; the incrustations also acquire greater thickness and occupy a more extensive portion of integument, sometimes covering the entire scalp. The constitutional symptoms are usually very light or entirely absent; and after the pustules have come to maturity and poured out their contents, the local symptoms gradually subside into a milder form. As the disease begins to decline, the incrustations cease to be formed or become thinner as each successive crop is produced; the redness, tumefaction, heat and pruritus gradually disappear, although the skin remains of a vivid red, and is tender for several weeks, and liable to be attacked by a fresh outbreak of the eruption. In some instances, the local applications that are injudiciously employed not only occasion a continuance of the malady, but greatly augment its severity and increase the difficulties in the way of cure. The topical use of arsenical and mercurial preparations of a too stimulating nature has been known to produce very serious injury, especially where the face has been the seat of the disease. Two instances of the kind have come within our knowledge. In the one, arsenic, in the other, corrosive sublimate was employed, and in both the deeper tissues of the skin were at once involved in a high degree of irritation and inflammation. Thickening and infiltration of the integument and subjacent cellular membrane took place to an alarming extent, together with enormous swelling of the neighboring lymphatic glands, and several months elapsed before the mischief thus induced could be repaired. Both

patients were young men, and the eruption was on the face and neck, reaching from ear to ear.

In men, the face is the part most frequently affected. The eruption generally commences with a few pustules crowded together about the upper lip, the chin, or in front of the ears. These pustules occasion a slight itching sensation, but no other inconvenience. The patient pricks them, and they dry up without receiving or seemingly requiring further attention. But the portion of skin upon which they are developed remains red, hardened, thick and itchy; and quite soon a large crop of pustules appears, with an increase of the local disturbance. There are now considerable heat, smarting and burning sensations, which are felt over quite an area, and the morbid action spreads rapidly in all directions. Under these circumstances, the individual, instead of applying to a regular physician for advice, is quite as likely to procure some patented article from an irresponsible source and apply it to the face, which is thereby, in all probability, made very much worse. Such is the early history of very many cases of impetigo, which has, we think, got a bad name for obstinacy because it has so often been badly treated in its earliest days of development. In some cases, where no local applications are resorted to and the eruption is left to itself, the inflammation gradually subsides, and the affection passes into a chronic state and remains somewhat stationary for many weeks, when, provoked by some slight cause, it seems to acquire new life, and the morbid action is greater than ever. Several red patches, studded with pustules, spring up almost simultaneously and soon coalesce; and in this way it is not long before the eruption spreads over quite a large space. This process being repeated from time to time, nearly the whole of the face is at length covered by a succession of these characteristic pustules and the variegated incrustations to which they give rise. The latter present different shades of coloration and different degrees of thickness, according to their age and according to the amount of inflammatory action at the several points of attack. Some are very thick, dry, nearly amber-colored and friable; some are of less thickness, pasty, tinged with bloody serum, and very dark; while others are of a yellowish or greenish hue; and still others are met with that are perfectly white and conical in their shape. These latter are compared by Alibert to stalactites, and are usually seen on the eyelids, borders of the eyebrows, nose, &c. When the eruption has continued for a

long period, all these different shades of color may be seen at the same time, and the diseased surface bears no little resemblance to a piece of mosaic work.

As the eruption advances towards a radical cure, these incrustations become gradually thinner and of lighter color, and correspond very much in appearance and structure to the laminated crusts of chronic eczema. They no longer adhere to the derma, but are shed, as numberless flakes or micaceous scales, and at this stage are entirely without moisture. Finally they cease to be reproduced, and a faintly red surface alone remains to indicate the former site of the malady. In some cases, when the inflammatory action is very intense, it culminates in the formation of several hard hypertrophous ridges of the skin, an inch or two in length and raised two or three lines above the surrounding integument. These resemble the cicatrices of a deep burn, or the thickening of the skin produced by the blending of the tubercles of Kelis cylindracea. These ridges often remain for some weeks. They rarely exhibit any tendency to ulceration, but are carried away by absorption. A case of this kind is now under our care.

Impetigo sometimes confines itself entirely to the upper lip and the mucous lining of the anterior nares. The scab is dense and adherent, making the individual look as if he wore a moustache. In other instances the lower lip is the only spot invaded by the malady, and here it remains for years unless properly treated. When the lips are the parts affected, the purulent discharge is very trifling in amount, but the patient experiences particular discomfort from the constant recurrence of deep transverse cracks which are liable to bleed whenever he laughs or eats; and at times the parts are covered with numerous filiform shreds of dry epithelium which prick the tongue, and the patient is continually tempted to pull them off. This variety of the eruption is commonly seen on young persons.

The legs and the thighs are often invaded with the disease under consideration. The form which is especially apt to attack these parts is termed impetigo scabida; a name first given by Willan. The pustules commence at some distance apart, and usually on the outer aspect of the limb. They burst in two or three days, shed their contents upon the surface, where they harden into thick yellowish brown incrustations which are continually moistened by the discharge that is poured out from beneath. In a little time, the

exudation begins to diminish, and the scabs acquire more solidity and seem to be nearly ready to be detached from the derma; when, in all likelihood, a new crop of pustules appears here and there, the malady extends, and in time nearly the whole limb is encased in the thick, rough incrustations, which are cracked in numerous places and which give to the limb the appearance of the bark of a tree—hence the epithet *scabida*. The pruritus is very severe. Sometimes the eruption extends down to the ankle and along the foot, where the scabs are of immense thickness, wrinkled or fissured, and nearly black. There is infiltration of the subcutaneous structure, and the disease sometimes extends even to the nails, which are broken and loosened from their attachment, and the lunula is destroyed. Relapses are apt to recur, and the malady passes into a chronic state unless great care is taken to prevent it. We once saw a very extraordinary case of this kind produced by the injudicious employment of a strong ointment of the iodide of potassium for the cure of scabies on a young man. Nearly the entire surface of both thighs was encased in thick, dark colored incrustations.

Individuals are occasionally visited with repeated attacks of impetigo, in immediate succession, sometimes by a continuance of the original cause of the eruption, at other times in consequence of the use of remedies not well suited to the morbid condition of the affected parts. Again, in some instances the complaint returns periodically in the spring or autumn for several years in succession. All parts of the body and limbs are subject to the disease. The upper extremities, however, are usually exempt, unless the eruption has a syphilitic origin. In such cases, it is quite common to see large crops of pustules and thick, black incrustations nearly surrounding the elbow joint and the integument in its vicinity; and the disease under these circumstances always assumes a chronic form. The integument does not become very deeply infiltrated or thickened, but is more or less excoriated, yields a viscous, semi-purulent, or sanguineo-purulent secretion, which dries up into incrustations, and these incrustations often form a thick investment upon the part affected. Other concomitant circumstances and symptoms will sufficiently aid the judgment in arriving at a correct diagnosis in regard to this particular variety of impetigo. We mean the history of the case.

Hardy and Fox, both able writers, speak of a variety of the eruption which they term *impetigo acniforme*, characterized by the

development in the beard of a number of little vesico-pustules, which are isolated, rounded, of transient duration, without any indurated base, and about the size of a pin's head. One may see eight, ten, or twelve appear at the same time on the lower part of the face, but always discreet and isolated. They last from three to five days, when they break and are replaced by crusts. There may be a succession of vesico-pustules and crusts, which prolong the disease for months and years. This variety of the disease is peculiarly difficult to cure. There is no induration of the cellular tissue, no parasite, no loss of hairs. To us it seems that the eruption is nearly identical with what is denominated by other writers, *eczema impetiginodes.*

The distinctive characters of impetigo in all its varieties are, small psydracious pustules, not at all, or only in the slightest degree, elevated above the surrounding skin; viscous, purulent secretion more or less abundant, and thick, yellowish-green, brown, greyish, honey-like or semi-transparent incrustations.

Eczema impetiginodes is a mixed form of eruption, in the commencement of which there is, as a general rule, vesiculation which is to be regarded as constituting the ordinary elementary type of the disease, although the discharge at a late day in the progress of the eruption becomes like that of impetigo.

If the chin is the affected locality, the disease may be confounded with sycosis. But in the latter, the pustules are larger and on a hard indurated base and are phlyzacious and discreet; the secretion is scanty, and in certain stages of the affection the presence of parasitic formations can frequently be detected under the microscope. The crusts in sycosis are not renewed when they are cast off; whereas the contrary is the fact in impetigo. As sycosis becomes chronic it generally exhibits little bald patches, from which the hair has dropped out; it usually affects the chin only and rarely occupies the sides of the face. In these particulars it differs from impetigo.

Impetigo is sometimes mistaken for scabies. It is true that as regards the choice of locality the two eruptions often resemble each other, in being situated usually upon the back of the hands, the fingers, about the elbows and the inner and front part of the thighs. In impetigo the eruption shows a disposition to heal in the centre, while the periphery of the diseased patch remains unchanged; scabies betrays no such tendency, and if it is situated on the hands we can generally discover two or three suspicious pustules near the

wrist or along its inner border. These pustules like all others of scabies are more hemispherical, distinct and elevated than those of impetigo. If scabies is situated on the thigh, it simulates impetigo more nearly than it does elsewhere; but even here there need not be any doubt to a careful observer. If the disease is really scabies, the itching is more intense and urgent when the limb is exposed to the air or warmth, than is the case with impetigo. Besides, the eruption of scabies spreads with greater rapidity than impetigo. Moreover, the two eruptions have a very distinct and dissimilar history, which, if investigated, will sufficiently proclaim their individuality. We need not dwell here upon the presence of the acarus in the one and its absence in the other.

Impetigo is in most cases produced by constitutional causes. Among the young, it prevails chiefly in children that are poorly fed, poorly clothed, and live in badly ventilated and dirty apartments. In persons who are predisposed to cutaneous affections, very slight irritants will evoke the eruption. It is frequently developed on the face, hands and other portions of the skin in workers in iron, brass, silver, copper, &c. Taxidermists also, who make use of large quantities of arsenic in their occupation, occasionally suffer from this eruption on the hands, face and neck, and we have seen several instances of the eruption on the hands and fingers of individuals occupied in the manufacture of a certain modern style of bank notes familiarly known as "greenbacks." These greenbacks contain arsenic in their composition.

The prognosis is favorable. If the disease is treated judiciously it can generally be brought to an end without difficulty in a few weeks; but in very many instances the physician finds it impracticable to call into exercise all those hygienic aids and therapeutic measures which the case demands, and then it is apt to become chronic, tedious and extremely difficult to manage satisfactorily.

Treatment of Impetigo in Children.

If the patient is a nursing child, the milk should be examined under the microscope, if practicable, and if found at fault, the child should receive its supplies of good nourishment from other sources. If it is old enough to be weaned, this change should be made rather than to procure a new wet-nurse for it, for in the latter event great risk is run, that the blood and therefore the milk of this nurse is of impure

quality. The child will thrive well on good milk from the cow, or a little cream added to the milk occasionally; strong beef tea now and then, will also be proper, care being taken to watch its effect on the bowels; or it may be allowed to suck a bit of lean beef two or three times a day. The above will afford a generous bill of fare from which a judicious mother can make a selection that will keep her offspring in a healthy state, so far as diet is concerned. Gingerbread, and all kinds of cake are to be avoided, for they will soon take from the child the power to digest the simplest food. Having suitably regulated a scale of dietetics, and made all needful provision to secure salutary hygienic influences, the way is prepared for general and local treatment. In regard to the former, but little is required for a young child.

If the disease is on the head, it will be proper to administer a laxative of the submuriate of mercury, one grain rubbed up with the same quantity of loaf sugar, and dropped upon the tongue of a child from one to two years old. This may be repeated every eight or ten days to a child of good general health. If it is of a feeble frame and condition, then the calomel is contra-indicated. Tonics are called for instead. The syrup of the iodide of iron and Fowler's solution of arsenic, as recommended in the treatment of eczema infantile in a previous paper, are equally indicated in cases of infantile impetigo. And these are about all the constitutional remedies that are applicable to a young child from one year to eight or ten years old.

The local treatment should now engage our attention. The scabs formed by the contents of the psydracious pustules are easily softened and made ready for removal by the application of a solution of the carbonate of soda; when the scalp is the seat of disease, ℞ Sodæ carbonatis, ʒ i.; aquæ fontanæ, ʒ viij. M. Soft rags saturated with this solution are to be constantly applied to the diseased integument, and an oiled silk cap should be placed over the rags to prevent evaporation. As soon as the scabs are removed, the raw surface should be wiped dry and carefully examined to ascertain if any small ulcerated spots have formed, and if so, they should be coated over with a weak oxide of mercury ointment, ℈ i. to ʒ i. If any little abscesses are detected, they should be punctured with the point of a lancet. They soon heal up without further trouble. If there is much hair on the scalp, it should be clipped short and kept so.

After the scabs are removed, a solution of the carbonate of soda, ℈ i. to ʒ viii. of water, will make a suitable dressing to the scalp. Cloth saturated with this should be laid on smoothly, so that the lotion shall come in contact with the entire surface. The pruritus, which is generally a characteristic of the eruption in its early stages, is in most instances allayed by this local remedy, which is to be employed so long as its efficacy is apparent. If it proves inadequate to the exigencies of the case, the following will be found an excellent adjuvant. ℞. Acidi hydrocyanici diluti, ʒ i.; spiritus vini, ʒ ss.; emulsionis amygdalæ, ʒ viii.; M. Signa.—Lotion. Lint saturated with this is to be applied for an hour or two each day, to the affected parts; and during the rest of the time the alkaline solution is to be employed. If the sedative effect of the hydrocyanic acid is not sufficiently powerful, it can remain on for a longer time than is mentioned, and can be repeated with safety morning and evening.

The benzoated oxide of zinc ointment is also an appropriate local application at this crisis, especially by night. It should be laid on so as to form a thick coating to the scalp, and a night cap should be fitted to the head.

A mixture containing the oil of cade, rectified spirit, and a small quantity of caustic potash, and used as a local application, is also beneficial when the itching and irritation in the parts are obstinate. ℞. Potassæ fusæ, grs. xv.; olei cadini, ʒ ss.; olei camphorati, ʒ i.; spiritus vini, ʒ ii. M. A portion of this is to be rubbed briskly over the eruption night and morning, and to be washed off with warm water and soap before each re-application. As the pruritus abates, the lotion may be used less frequently; and during the intervals of its application the scalp is to be covered with the benzoated zinc ointment.

After the severity of the local symptoms has materially subsided and the eruption has passed into a chronic state, an ointment of the nitric oxide of mercury will be found appropriate. ℞. Hydrargyri oxidi rubri, grs. xxiv.; pulv. camphoræ, grs. vi.; unguenti simplicis, ʒ ii. M. This ointment is to be applied freely two or three times a day to the affected surface. In a majority of cases of impetigo capitis the foregoing method of treatment will be found efficacious, and sufficient to cure the complaint.

If the face is the seat of the eruption, it may perhaps be impracticable to employ lotions with the same freedom as when the head is

the locality affected, and our chief reliance must be upon ointments. But whether lotions or ointments are to be employed, those which have been suggested for the treatment of the complaint when developed upon the head of a young child, are equally important and valuable in our attempts to cure the same affection when it occurs on the face or any other region.

Treatment of Impetigo in the Adult.

When this eruption makes its appearance on any portion of the cutaneous investment of an individual who has arrived at maturity, it is in most instances a much more intractable disease to manage successfully than in patients only a few months or a few years old. The causes that give rise to it and perpetuate it in the adult are sometimes a little obscure in individual cases; or if apparent, it is not always an easy matter to remove or overcome them. The habits or employment and other surroundings of the patient may be so entirely antagonistic to good health, and withal so steadfastly fixed, that the physician in consultation encounters at the very threshold of his endeavors, obstacles of no mean weight and power which stand in the way of success. But as regards these impediments there is no door of escape. They are to be endured; and the physician is expected to proceed and to cure, or peradventure forfeit the confidence of the patient and his numerous sympathizing friends. With these possible circumstances in view, let us consider the best means of cure.

The condition of the system generally is the first thing to be ascertained; and if there is any irregularity in the functions of any of the internal organs, these are to receive attention, and then the way is prepared to make a direct attack upon the cutaneous lesion.

In very many cases that present themselves, the eruption is quite limited in extent and is chronic, and the sides of the face seem, as if by preference, to be the parts most frequently implicated. If the local inflammation is mild, and the patient otherwise in good health, there is no objection to the immediate use of some arsenical preparation internally. For this purpose the choice may be Fowler's solution, at the rate of twelve minims a day, or one Asiatic pill a day for three or four weeks, unless some gastric disturbance is produced by the mineral. After its employment for the time above mentioned, it should be taken in the same quantities every other day

only, and in this way continued for six or eight weeks longer. It will be good practice to combine the internal administration of cod-liver oil with the arsenic. A common tablespoonful two or three times each day will ordinarily agree well with the patient and promote his recovery.

With regard to diet, no special care is requisite other than to have the patient live on good, substantial food. Nothing can be gained in any case by a starvation plan in the daily allowance of food. Stimulating drinks, of course, are to be prohibited. If the patient's health is below a fair standard, it will be advisable to prescribe for him some ferruginous preparation, such as the judgment of the practitioner may prefer. The tincture of the chloride of iron is our choice, then the citrate of iron and quinine, tartrate of iron and potassium, or mistura ferri composita, the latter in pretty large quantities if anæmia decidedly exist.

The liquor hydriodatis hydrargyri et arsenici (Donovan's solution) is recommended by some authorities; but it is an exceedingly potential agent, and is not very uniform in its effects, nor yet manageable, and will seldom act in a way to warrant its employment for any length of time. After a few doses of only a few drops each, the stomach is apt to manifest great repugnance to its presence, and its use has to be abandoned. Such, at least, has been our experience with it.

If the complaint originates in a venereal diathesis, as is but too often the fact, it may be expedient to administer minute quantities of the bichloride of mercury in conjunction with the iodide of potassium for several weeks, or the mercury may be alternated with some of the preparations of iron, or with some of the mineral acids.

Local Treatment.—Whatever part is affected, ointments of different kinds are the chief local means to be employed. Of these are several which stand about on an equality with each other. If the case is an ordinary one, and not attended with a great amount of inflammation and pain, the nitric oxide of mercury ointment may be applied. ℞. Hydrargyri oxidi rubri, ʒ i.; pulveris camphoræ, ʒ ss.; glycerinæ, ʒ i.; unguenti benzoati, ʒ ij. M. The diseased surface is to be kept constantly covered with a portion of this ointment, which should be renewed three or four times in the twenty-four hours.

In the chronic stages of the eruption, good results will follow the frequent use of a local steam-bath, which can be administered by the

patient himself by means of a wash-bowl of hot water and a napkin. Let some eighteen or twenty minutes be devoted to this procedure, and the oftener it is repeated the greater will be the benefit. It will keep the diseased surface free from incrustations, and will also greatly tend to diminish the local engorgement of the capillaries and equalize the circulation in these vessels. In the earlier stages of the complaint, and while the inflammation is at a high point, this remedy is not beneficial.

The oxide of lead is a valuable discutient application in old cases, where there is a good deal of thickening and infiltration of the integument, and more especially if there is chronic glandular swellings in the cervical region; and it is appropriate for individuals of all ages. ℞. Plumbi iodidi, ʒ ij.; pulveris camphoræ, ℈ ss.; unguenti simplicis, ʒ ij. M. The iodide of sulphur is an ingredient of well-known efficacy in the local treatment of this eruption. The following is a suitable formula:—℞. Sulphuris iodidi, ℈ i.; pulveris camphoræ, ℈ ss.; olei bergamotæ, gtt. x.; unguenti simplicis, ʒ ij. M. There is another preparation of sulphur which is entitled to confidence. It has for many years borne the test of a large experience in almost every medical man's practice in this country; and in presenting it in this connection we bring to mind an encomium once passed upon it in our hearing by an eminent surgeon, who, speaking of it as a local remedy, said that "it would cure anything." The formula is as follows:—℞. Pulveris ammoniæ chloridi, ʒ i.; olei camphorati, ʒ i.; glycerinæ, ʒ ij.–iij.; sulphuris sublimati, unguenti simplicis, āā ʒ i. M. The quantity of glycerine can be varied at pleasure, according to the desired consistence of the ointment. The ammonia should be reduced to an impalpable powder before being mixed with the other ingredients. This preparation is particularly adapted to the disease when it is in a chronic state and situated on the face or head.

If a topical remedy of a soothing character is required at any stage of the treatment, the following will be beneficial:—℞. Liquoris plumbi, ʒ i.; olei camphorati, aquæ calcis, āā ʒ ij. M. Signa. Liniment. Or the almond emulsion, with prussic acid, the formula for which has already been given, may be employed. For the removal of incrustations, which are sometimes very thick and troublesome, particularly in the adult subject, and also with a view to diminish any profound infiltration, the alkaline lotions, warm emollient fomentations, and poultices will be required.

If the eruption is on the face, the beard and whiskers should be kept short with scissors. The treatment now set forth is all that is required in the cure of the disease under consideration, whatever portion of the cutaneous membrane may be affected.

An attack of impetigo does not possess the clinical advantage of destroying in the economy the liability to a second invasion, as is the case with the eruptive fevers which have their origin in specific poisons; but on the contrary, we are obliged to acknowledge that an individual who has once suffered from it, or from eczema, is a prominent candidate for subsequent manifestations of the same complaint.

Scabies.

This eruption is endowed with an ubiquity unsurpassed by any other cutaneous disease. It prevails in all climates, at all seasons, among all ages and descriptions of men, women and children—thus showing that it is no respecter of persons. It has its origin in an animal parasite which has received the names of acarus scabiei, sarcoptes hominis, &c. &c. It is found more frequently among the poor than the rich, on account of the crowding together of the former, and their greater liability to contract those diseases which are propagated by contact. Neglect of personal cleanliness is only indirectly instrumental in the production of scabies. It furnishes a foothold for the disease, while the rapidity and extent of the invasion are in proportion to the unguarded state of those parts of the integument which are first attacked. The use of the stronger alkaline soaps by the poorer classes is one of their greatest safeguards against the complaint; not alone because it insures a clean skin, but because it destroys at the same time the living cause of the malady. More will be said on this subject in the treatment.

This affection has been familiarly named *the itch*, from its most characteristic symptom. In no other cutaneous disease is the pruritus so intense as it is at times in this. The intolerable itching and the mechanical irritation of scratching, by which the patient seeks to afford relief to the perverted sensibility of the skin, are the causes of many of the subsequent lesions of this organ. The condition of the system and the duration of the disease are potent agents in the character and extent of the eruption. Its chronicity is often due

not only to the neglect of proper measures for destroying the animal parasite which is its cause, but also, it is probable, to the deteriorated condition of the tegumentary and general system in consequence of the excessive nervous irritation. If we omit, for the present, the characteristic lesions which are produced by the burrowing of the parasites, the earliest appreciable change in the condition of the skin is the pruritus. This is at first of a purely local character. As the disease becomes more extensive, the pruritus is not limited to those parts of the integument which present the traces of the acari, but is of a general character. It is possible that a portion of this excessive nervous irritation is subjective. The pediculus corporis frequently occasions a similar excitable condition of the different portions of the entire surface of the body, although a few only may be present, and these at places remote from the seat of pruritus.

Much has been said about the regions of the body upon which the acarus of scabies is most commonly found. This would be of little importance did it not sometimes furnish a distinctive element in the diagnosis of the disease. The positive statements of some writers upon this subject would seem to leave no doubt as to the places of election in this disease. Certain observers, as the Germans, are in the habit of examining the nates as one of the most favorable regions for the purpose of finding the characteristic burrows of the acari; others, as the French, are not satisfied until the prepuce and glans penis are thoroughly exposed; while the English and American dermatologists are contented if they find a burrow between the fingers, or in the palms of the hands, or the soles of the feet. There is no doubt but the burrows or cuniculi are to be found in all these regions in most cases. Warmth and undisturbed condition of the parts are both favorable to the attacks and the propagation of the parasites. All those influences, whether atmospheric or chemical, which disturb the above conditions, render the soil so far unfit for the habitation and multiplication of the itch insect. Habit and the occupation have also much to do in affording facilities for its inroads. Shoemakers are most liable to the localization of scabies on the nates from the habitual warmth of these parts. Those whose hands are constantly wet or exposed to cold, or in contact with acrid substances, are seldom affected with scabies on these parts. The delicate skin of women and children affords the most favorable conditions for the general distribution of the acari. Thus, we find the

cuniculi not only upon the hands and feet of children, but elsewhere upon the surface. In infants, the soles of the feet are often the best places for finding the furrows. They are also found in the palms of the hands, and may be rendered more apparent if ink is spread over the suspected part and in a few minutes wiped away with a rag that is slightly moistened with water. The loose, dead epidermic cells imbibe the coloring matter and are blackened by the tannate of iron, so that the furrows appear either as straight, curved, or tortuous lines, or composed of series of little black dots. The usual length of one of these little canals is two to three lines; they may, however, be much longer. They are situated in the epiderma, and are caused by the female, which penetrates this tissue for the purpose of depositing her eggs. The parasite may be removed by means of a pin or needle pushed into the open end of the canal and raised so as to rupture a portion of the cuticle which forms its exterior covering. The animal is then displaced most easily by the blunt point of a pin. It is very minute, glistening, and just distinguishable by the unassisted eye as a little oval, pearly mass. A lens magnifying five or ten diameters will reveal its movements to the eye and some of its most distinct characteristics. Higher magnifying powers will be required in order to study the details of its structure.

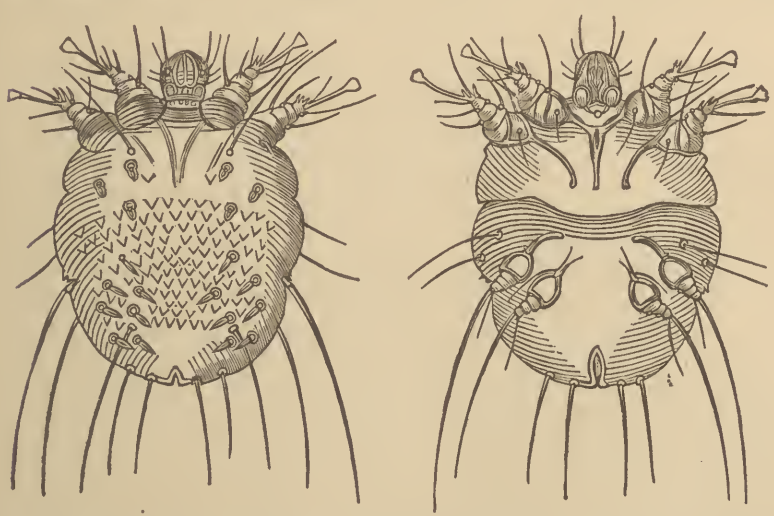
The disease presents certain distinctive features, which are immediately recognized as soon as it is seen by the experienced observer. The presence of the burrows helps to confirm the diagnosis, but is not altogether essential to the validity of our conclusions. We recognize scabies as we do the familiar features of an old acquaintance, not from a minute examination of the individual traits, but by the general aspect. Indeed, diagnosis in all skin diseases is much facilitated in this manner, to say nothing of the broader basis upon which our conclusions are thus made to rest. It is safe, then, if, in the presence of other well-pronounced symptoms, there is a failure for some reason or other to detect the furrows, to still adhere to our opinion that the disease is scabies; since our general convictions are often the most reliable ones in such cases.

The eruptive appearances in scabies are quite various. They consist of papules, vesicles and pustules; and of all of the conditions of the skin which arise from the elementary lesions. They constitute, apart from their cause, and the peculiarities of their situation, all of the different grades of inflammation which are to be found in an eczematous or impetiginous affection.

The papular and vesicular forms of the eruption are, however, of the most common occurrence in scabies. Generally speaking, it is in the chronic forms, or when the disease attacks the debilitated, that a pustular eruption makes its appearance. This is peculiar, even then, to certain portions of the skin, such as the hands and feet, in most instances. In children, also, it is more liable to occur than in adults. The papules are quite numerous upon the back of the hands and upon the arms. The vesicles occur upon the inner borders of the fingers; and the pustules are also found in the same position, and likewise in the palms of the hands. In the latter situation they are broad and flat, on account of the thick and unyielding nature of the epiderma.

The Acarus.

The length of the acarus is about $\frac{1}{150}$ of an inch, and its breadth about the same when arrived at adult life. The head is oblong, obtusely pointed, short-set; has slightly dentated jaws, with upper and lower lips, and is capable of elongation or retraction at will



from beneath the dorsal plate, or carapax, as it is termed. It has two eyes, placed laterally near the attachment of the head to the body. The animal has eight legs, of which four are near the head, ending in sucking cups or discs, and four more posteriorly inserted, each terminating in a bristle. It has twelve hair-like filaments, or spines, projecting backwards from the posterior segment of the body,

some long and some short, and being all directed backwards they assist the creature in its attempts to penetrate the epidermis with its flattened snout, and render any retrograde motion or retreat utterly impossible. The males are much less numerous than the females (1 to 10, according to Bourguignon). The movements of the male are much more rapid than those of the female. The form of the acarus has been compared, and not inaptly, to that of a tortoise. Under a high power of the microscope, it appears almost transparent. The male makes no furrow or cuniculi; he either burrows a short distance in the cuticle or is found on the surface. The female produces the cuniculi for the purpose of depositing her ova, which vary in number from 25 to 50. Some observers tell us that she deposits one ovum each day until she completes this labor; others state that she lays four eggs at a time, and that the period of incubation extends over three or four days. During this process the acarus remains at rest in its furrow. The eggs are arranged either in pairs, the outer surface of each touching the walls of the furrow, or they are disposed in a single line.

The contagious nature of scabies depends on the transmission of sarcoptes of both sexes, or of a pregnant female, from one person to another. A single unimpregnated female or male acarus alone cannot produce the disease.

The two accompanying wood-cuts represent the female acarus and the moniliform arrangement of her ova, together with fragments of excrementitious matter as deposited in the cuniculi.

Diagnosis.—To those who are not perfectly familiar with cutaneous eruptions the diagnosis of scabies is not always an easy matter; and yet a correct diagnosis is of the highest importance, not only as regards the reputation of the attending physician, but also because an erroneous decision may throw a whole family off their guard and cause all its members to be infected with the loathsome malady in question. And we could relate more than one instance where a physician has lost desirable family practice in consequence of mistake in regard to this disease.

The sulci or furrows which are the characteristic mark of the presence of the acarus, may often be detected on the buttocks, on the

lateral surfaces of the fingers, or on the inner margin of the wrists, and in young children on the inner edge or border of the feet. These furrows or cuniculi are more frequent in the papular form of scabies, than in the vesicular or pustular varieties. The desirableness of finding the cuniculi, acari and their ova, is admitted; but it sometimes—indeed we may say it frequently happens, that neither the one nor the other can be detected, especially when the eruption has become chronic and chiefly pustular in character; and the diagnosis must be established by considering its locality, its history, its present appearance, and in ascertaining whether there is evidence of its contagiousness or otherwise.

The eruptions with which scabies is likely to be confounded are eczema simplex, lichen simplex, and prurigo.

Eczema simplex presents vesicles more flattened, and clustered together, and less acuminated and less discrete than those of scabies. The pruritus in the two diseases is very different. In eczema it amounts to a painful smarting sensation; and scratching does not relieve, but rather augments it: whereas in scabies the sensation is not altogether unpleasant, and a thorough application of the nails is an efficient and delightful remedy.

Lichen simplex always attacks the dorsal aspect of the hands, arms, and legs, and never appears in the inter-digital commissures. The papules are exceedingly small and are generally closely grouped together, which is rarely the fact with scabies. The papules of lichen are of the color of the skin and produce but very little itching. In young children and in adult females with soft tender hands, the eruption of scabies is very often seen in the palms:—there will be, perhaps, some half a dozen vesicles or large and flattened pustules scattered here and there in this locality.

Prurigo is also a papular eruption developed in places exactly opposite to those attacked by the itch. When the papules of prurigo are torn by scratching, little black scabs are formed on the summit; whereas the scabs in scabies are merely thin yellowish scales loosely attached to the parts beneath.

A peculiar rough scaliness or desquamation of the epidermis in the immediate vicinity of the eruption of scabies is a fact spoken of by some dermatologists, by others not. When the eruption is seated on the hands, this furfuraceous condition is most observable in the

space between the thumb and index finger. The same appearance of the cuticle is exhibited when the disease occupies the elbow, the inner border of the axillæ, or the loins. The condition of the surface here referred to is produced by the repeated efforts of the parasites in their search after food and shelter. We have often observed it in chronic cases, and have directed the attention of those who were in a position to examine several cases of scabies daily for a long period, to this diagnostic mark. They have fully confirmed the observations of Prof. Wilson and our own in regard to this point.*

By most dermatologists the physician is taught how to extract with a pin or needle the acarus from its retreat in the little mound at the terminus of the furrow which it cuts through the epidermis, and how to transfer it to a glass slide for microscopical examination, and thus determine with certainty the nature of the eruption. This procedure is truly scientific; but let us see to what extent it can be reduced to practice. Probably not one physician in forty in this country is the owner of a microscope, so that to the great mass of the medical profession all directions given for obtaining the parasite as the essential element in diagnosis are, for all practical purposes, a dead letter; and other methods of identifying scabies must be employed; and in our opinion there is none superior to an exact knowledge of the several cutaneous affections particularly mentioned a moment ago. This knowledge is always available, whether the physician is at home in his office or abroad among his patients; and with it he never need falter in arriving at a differential and correct diagnosis. The microscope long since performed a valuable service in revealing the cause of scabies; but it does not describe the eruption itself; and unless physicians generally acquire the ability to recognize the disease independently of this instrument, is it not truth to say they never will be able to recognize it?

In very chronic cases the eruption of scabies sometimes covers the entire cutaneous surface; in young infants including the scalp. Where the complaint occupies such extensive ground, the papular form is usually developed on the scalp, the back, abdomen, and upper portion of the extremities. On the hands, fore-arms, feet, ankles and buttocks, the disease is vesicular or pustular, or more frequently both. Oc-

* Nayler and Caillault make mention of the same peculiarity of the skin in connection with scabies.

casionally a few pustules appear on the inner aspect of the thighs. Here, as well as elsewhere, they acquire a much larger size and are more distinct than those of impetigo, and they push higher upward, above the adjacent surface. Where the disease has continued unchecked for a long period in young subjects, the whole of the hands and fingers is completely covered with the eruption, and they become badly swollen and painful, the patient being scarcely able to bend the fingers. Sometimes little abscesses form on various portions of the surface during the existence of scabies as a consequence of the excessive irritation which this disease produces. Sometimes the eruption seizes upon the front of the elbow joint as a principal locality and where the delicacy of the cuticle offers facilities for the parasite to take lodgings. So in like manner the nipple of the female is occasionally the seat of the disease, while perhaps other parts of the surface are nearly free from it. The skin around the base of the nipple becomes excoriated and quite painful, and a slight discharge takes place. The eruption in this locality is usually of a vesicular character.

Treatment.

We shall consider somewhat briefly this point of our subject; contenting ourselves with the indication of those remedies which seem to be most efficacious, and which are least objectionable and expensive to the patient.

Alkalies form the base of nearly all the parasiticides in use for the cure of scabies. They are the most reliable, the safest and least obnoxious to all parties. Sulphur has been regarded as a specific in this disease; but as it is in nearly all cases combined with lard and potash or some other alkaline ingredient, the inferences drawn from its use are not wholly conclusive as regards its curative agency.

Alkalies not only act upon the epiderma, and destroy and remove its superficial portions, but are among the most deadly parasiticides which have yet been discovered. They are cheap, cleanly, and always at hand whenever needed. Nearly all the valuable preparations, whether ointments, lotions, or soaps, in use for the treatment of scabies, contain an alkali in some form or other. The famous pomade of Helmerick contains the subcarbonate of potassa; the lotion of

Vleminckx, of Brussels, used in the Belgian army, and afterwards endorsed and recommended by Prof. Hebra, of Vienna, contains caustic lime, and is in fact a penta-sulphide of calcium; and Wilkinson's ointment has as one of its principal ingredients the common black soap, or sapo viridis, which is used for domestic purposes throughout Germany. In our own country we have a soap much superior to the above in its detergent and other qualities. It is commonly made, in the rural districts, from the ley obtained from the ashes of the hard varieties of wood; and consequently contains potash in combination with fat or grease. This soap is used by the masses for the ordinary purposes of ablution, and is seldom followed by injury to the skin. It removes the unhealthy cuticle; and is perfectly destructive to parasites of all descriptions.

A few years since, at our suggestion, Dr. Howard F. Damon, then Superintendent of the Boston Dispensary, instituted a series of extensive trials with this remedy, for the cure of scabies. The disease was then fearfully prevalent among the poorer classes, being brought home by soldiers on their furloughs from the Union armies. Probably at no time was there ever a better opportunity among us for the trial of such a remedy as this. From the *several hundred* cases thus treated, Dr. Damon reports to me the most satisfactory results. In no instance has he known this remedy to fail when it has been thoroughly applied; and rarely, if ever, is there any eczema in consequence of the application of the common domestic soft soap to the skin, in the treatment of scabies. After a fair trial of this article, Dr. D. concurs with me fully in the opinion that it is in several respects superior to the parisiticides now in use, and no remedy is cheaper or more ready at command. The proper mode of applying it is as follows:—Suppose the hands, wrists, &c. to be the parts involved in the eruption. The patient is to rub upon them about a common table-spoonful of the soap, using brisk friction at the time. Let the soap remain on until it produces a pretty severe smarting or tingling sensation. It may then be washed off with warm water, and the parts wiped dry. The same process is to be used for any part of the surface if necessary. Sometimes one application is sufficient; sometimes two or three may be required and may be repeated every third or fourth evening. These will be enough to cure all ordinary cases. If the eruption is very extensive it will be prudent to subject only a

part of the diseased surface to the action of the soap at any one time. For instance, the hands and arms at one time, and the next time the legs or a portion of the trunk of the body. There is quite a difference in individuals in regard to the length of time they can allow the soap to remain on comfortably to themselves. Those of peculiarly nervous temperament or very delicate skin can tolerate it only a few minutes, while others can bear it two or three hours before washing it off. For infants and very young children an ointment containing from ten to fifteen grains of the iodide of potassium to the ounce of lard, and applied every second or third night, is a perfect parasiticide in scabies. In recent cases a single application is often sufficient.

The Vleminckx solution cures the itch very rapidly, although it is a disagreeable remedy and very harsh for the delicate skin of females and young children. It is prepared in the following manner. Put ʒ ij. of sublimed sulphur and ʒ j. of quick lime into ʒ xx. of water. Boil down to ʒ xij. Stir the ingredients with a stick while boiling. Filter. The patient dips a brush made of bristles into the fluid and proceeds to paint the affected skin. As the fluid dries on, it leaves the surface of a yellow color from the powder which is deposited. The powder may remain undisturbed upon the skin for two, three or four hours, unless the smarting and pain become too severe. Of course it can be washed off at any time, if the patient is unable to bear it. One application is frequently enough. If its caustic action or that of the soft soap renders the skin raw or very tender, equal parts of glycerine and water, or a little cold cream can be smeared on.

I propose to close this article with the following quotation from a brief communication in a late number of the London *Medical Times and Gazette*:—

"To establish a new colony, it will not suffice that a male acarus, however potent in himself, should step across from one person to another, nor that an unimpregnated female should alone. They must go in pairs, like the animals into Noah's ark, or else the race cannot be perpetuated. But imagine a single pregnant female crossing, and the thing is done. As soon as she brings forth her litter the colony has begun. But the acarus is not adapted for these Leotard-like feats, and the pregnant female is always deep in the epidermis, tun-

nelling her way on, and laying her eggs as she goes. Now, as she tunnels, she, like all other engineers, makes air-holes through to the surface of the epidermis (these may be readily seen through a weak lens). Through these the young acari, when hatched, escape, to settle in some more or less distant part of the skin, if not disturbed before they are hatched. But the unhatched ova are a dust as fine as the pollen of a plant, and if the moist skin of the infectee only touch the skin of the infector, which is pierced with these little pores, which are full of half extruded ova, several of them are sure to stick to the infectee's skin, and so *(nefandum dictu)* he catches the itch."

Ecthyma.

This affection of the skin is characterized by large and prominent pustules, generally but few in number, and having a hard base, with a dull-red areola. These pustules are models or types of the *phlyzacia* of Willan. They appear in successive crops on different parts of the body, but most frequently on the extremities, shoulders, and buttocks. They are usually discrete, although occasionally several arise in the immediate vicinity of each other and coalesce. When they reach their maturity they dry up into thick, brown and adhering scabs, which, when they are detached, leave behind them superficial cicatrices, or dark-red stains, which remain for several weeks.

Rupia approaches in all its leading features very nearly to ecthyma. Hardy considers the two eruptions as in reality but one, and his views are adopted by other dermatologists. Both eruptions spring from causes that induce an impoverished state of the blood, and consequently debility of the economy to a greater or less degree; and both pursue a similar course, and require similar treatment.

Ecthyma is usually partial and successive; in some instances general in its invasion. Sometimes it continues but ten or twelve days, at other times it endures for many months. Willan divided the affection into four varieties, according to the constitution and age of the patient, viz.: ecthyma vulgare, ecthyma infantile, ecthyma luridum, and ecthyma cachecticum. These four varieties, however, can with

propriety be described under two types or forms, that is, *acute* and *chronic* ecthyma.

Acute ecthyma is most commonly developed upon the lower extremities, sometimes upon the arms, shoulders and neck; but rarely upon the face or scalp. It does not often give rise to very severe constitutional symptoms. The individual occasionally complains of slight febrile disturbance and sore throat for three or four days, while the pustules are being developed. These commence with a sense of pain, heat and burning in the part, followed by the appearance of small red points raised one or two lines above the surrounding skin, with hard indurated bases and well-marked and vivid areolæ. In three or four days purulent matter is formed, and the pustule varies in size from that of a pea to a marble at the base. When first formed they are like "blind boils." If the eruption is copious and is scattered over the limbs, shoulders, back and chest, as it is occasionally, a good deal of irritation is set up. The patient is deprived of rest; the neighboring glands and lymphatic vessels are inflamed and abcesses form. In aged people it frequently passes suddenly from its simplest type to a much severer form, and a gangrenous condition of the affected locality supervenes (ecthyma gangrænosum). Sloughs form in the centre of the diseased mass very rapidly—an intractable ulcer is established, and the local disturbance soon involves the whole system and the patient dies suddenly. Sometimes the purulent deposit is removed by absorption, and the skin is restored to its natural condition after repeated desquamation.

In aged persons the pustules acquire larger dimensions than in the young. When the eruption appears upon the latter, the constitutional symptoms, sometimes by their intensity and the reaction which they excite, resemble the prodromata of the eruptive fevers or an outbreak of herpes; but these phenomena pass away as soon as the pain and burning sensation in the skin begin to subside.

On carefully examining the pustules of ecthyma, M. Rayer states that we recognize: 1. That in the first stage (red elevations) there is merely a sanguineous injection with a pyriform tumefaction of the epidermis; 2. That in the second there is deposited upon the summit of these elevations, rarely upon the whole surface, and under the epidermis, a certain quantity of purulent serum; 3. That in the

third, which supervenes soon after, there is deposited a quasi-pseudo-membranous substance in the centre of the elevation which is evidently *perforated;* 4. That after the escape of this matter and the removal of the epidermis the pustule appears in the form of a small cup-shaped cavity, surrounded by a hard and thick edge; 5. On the following days this thickened margin subsides, at the same time a slight cicatrix is formed beneath the crust, the centre of which is fixed within the point where the perforation was observed.

Chronic Ecthyma.—This variety of ecthyma is more frequently met with than the acute. The eruption appears in successive crops, and persons of a debile or cachectic habit are particularly liable to be its victims. It is confined to no age, although it is the form designated by Willan, *ecthyma infantile.* It is true that children who have been poorly nourished and confined in badly ventilated tenements, are very commonly sufferers from this affection; but no more so than aged people, and debilitated subjects. The pustules, like those of the acute form, vary in size; the crusts are dark; the ulceration is sanious and yields a fœtid and unhealthy pus. If the complaint is developed in an ill-fed and weakly child, the patient is very apt to become hectic, and after struggling a few months against the malign influences of insufficient nourishment, an unhealthy atmosphere, and the slow but constantly advancing progress of the malady, it dies.

In elderly people and in those who have injured themselves by improper living, the pustules are generally numerous, and extremely slow in reaching maturity. They are of a very deep livid color; are surrounded by a great extent of diffuse inflammation, and contain a sanguinolent, curdy fluid, rather than pus, which escapes from its confinement in ten or twelve days. The subcutaneous cellular tissue is involved, and there is a good deal of febrile action. The eruption then bears a close resemblance to the bullæ of rupia.

All the sub-varieties mentioned by different writers, under the head of chronic ecthyma, are but different stages of one and the same disease.

The causes of the eruption are bad nursing, bad air, or any long-continued irritating applications to the skin; hence it is occasionally met with especially in children who have had scabies, and have been subjected to the external employment of sulphur and other harsh

means of destroying the parasites. In adults, over-exertion, fatigue, privation, debility and certain occupations—as, for example, that of bricklayers, grocers, butchers—and excesses of various kinds, are all conducive to the occurrence of ecthyma. The eruption frequently follows smallpox, measles and scarlatina; and last, but not least, in the catalogue of causes, is *syphilis*, either hereditary or acquired.

The diagnosis of ecthyma rarely presents any difficulties. The large size, prominence, and hard base of the pustules and their isolation, are usually sufficient to distinguish them from the small, non-indurated, flattened pustules of impetigo which are superficial, more or less confluent, and yield a greater amount of viscid, purulent matter, and the incrustations produced by them are soft, thin, semi-transparent, honey-like, or yellowish.

The pustules of acne and sycosis sometimes resemble those of ecthyma, but in the latter there is always a much broader base and areola, while in the two former the hard tubercle-like elevations without areolæ distinguish them.

If the eruption arise from a syphilitic cause, it is usually of a more chronic character with a less marked areola or none at all; often a coppery stain is detected; the scab is very dark with circular markings, and there is generally a history to the case which clears up any doubt.

Although ecthyma of itself is not a dangerous malady, yet when viewed in connection with the impaired state of the constitution which is but too apparent in very many subjects, the prognosis is of a grave character.

Treatment of Ecthyma.—We have seen that the complaint is one of debility; our therapeutic treatment should consist therefore in the administration of remedies calculated to restore the enfeebled powers of the constitution; and all our local measures to the diseased surfaces must be of a tonic character. The first object of inquiry should have reference to the condition of the primæ viæ. The bowels should be moved by a mild purgative, and a free climinative action be maintained in them. In all other respects our course should be essentially hygienic during the continuance of the affection. The patient should be removed from all enervating influences, and should have the important benefit of salubrious air, cleanliness and a generous diet. If the patient is an infant, a sufficient quantity

of good milk from a wet-nurse, or the cow, is the only nourishment that need be sought for it. This, together with the other means just mentioned for improving its physical condition, will, if the case is of trifling severity, be all that the child will require for its restoration. If any constitutional remedial agents shall be deemed necessary, the syrup of the iodide of iron in doses suited to the age, will be one of the best. The Fowler's arsenical solution to the amount of one or two drops each day, may also be administered in the wine of iron and simple syrup. If the general health of the child improves, little trouble or anxiety need be entertained in regard to the eruption, which will hardly fail to disappear in proportion to the improvement of the general health of the child.

If the malady is of a chronic type and is apparently due to a syphilitic cause, the bichloride of mercury is called for, and may be given with the two-fold object of acting as a tonic upon the system and of annihilating from it if possible the specific cause of the eruption. The iodide of potassium is also another ingredient which can be employed advantageously in the circumstances here supposed, and these circumstances, we are free to remark, occur quite often in the history of chronic ecthyma. Relapses frequently supervene in a few weeks or perhaps months after every vestige of the eruption has disappeared. The only course of procedure is to resume the former medication. It is a matter of encouragement to know that such renewal of attack is in most instances far less formidable than its predecessor, that is, if the general condition of the child has improved satisfactorily; otherwise the case may well inspire our gravest apprehensions.

If the patient is an adult he must be placed under the most auspicious influences for the promotion of his general health. He must lead a regular life as regards all his personal habits; be well supplied with the most nourishing food, of which milk stands pre-eminent in the list—his residence to be in a salubrious situation, and he should practise ablution every day in warm water, with carbonate of soda in it at the rate of three or four ounces to 25 or 30 gallons of water. Treated in this way the crusts will very soon be loosened or entirely cast off, so that the little atonic ulcers can be brought into a healthy condition by means of stimulating applications. Among these a saturated solution of the sulphate of copper is one of the most efficient. The surface of the ulcers should be touched with

the solution once or twice every twenty-four hours, by means of a soft rag-mop. The acetate of lead ointment is a valuable article for topical use, likewise the benzoated oxide of zinc ointment of Bell. A saturated solution of nitrate of potash, applied three times a day, will promote their cure. In all cases of mild, acute ecthyma, the foregoing treatment is amply sufficient to bring the eruption rapidly to an end.

In the *chronic* variety additional measures are required. For internal use the mineral acids are important. The nitro-muriatic is perhaps the best. It may be administered as in the subjoined prescription: ℞ Acidi nitro-muriatici, ʒ iij.; infusionis quassiæ, ʒ viij. M. Dose, one drachm three or four times a day, in half a gill of water.

The tincture of the muriate of iron is also an excellent tonic for persons of dilapidated constitutions from dissipated habits. Cod-liver oil is to be prescribed to nearly all cases, old or young, at the same time with any of the other ingredients mentioned.

The iodide of potassium is entitled to confidence, also, in this eruption, more especially if the patient is suffering from the venereal poison. He should, in fact, be treated as for constitutional syphilis.

The local treatment of the chronic variety of ecthyma is substantially the same as that pointed out under the head of acute ecthyma. In cases of uncommon obstinacy some additional topical dressings may be needed, as weak nitric oxide of mercury ointment, or the unguent. hydrarg. nitratis diluted with simple ointment.

Rupia.

This cutaneous affection is directly *germain* to ecthyma. By some writers it is viewed as simply a variety of it. Whatever shade of opinion may prevail upon the subject, it seems evident, as we study the two maladies, that there is a very intimate pathological alliance between them. In addition, however, to what has been offered with regard to ecthyma, there are a few points which merit consideration as exclusively pertinent to *rupia*, of which there are two varieties—rupia *simplex* and rupia *prominens*—according to the severity of the disease and the form and thickness of the crust. The simplest form

of the eruption commences by the development of a bulla or tubercle, which varies in size, and is filled with a nearly transparent, serous fluid, which very soon loses its hyaline character by being mixed with sanious or purulent matter. This concretes and hardens into a thick, dark-brown and rough crust, resembling that of ecthyma of the severer form, and remains adherent to the derma for an indefinite period, unless removed by artificial means. When the incrustation is cast off, a foul and sometimes quite a deep ulcer is brought to view. In young children, the legs, arms, and the scalp are the situations usually occupied by the eruption. At this period of life it produces severe constitutional disturbance, and is associated in most cases with an extremely bad condition of the system. It sometimes appears after an attack of scarlet fever or typhus fever, or other exhausting diseases. These produce what is termed a cachectic state of the economy, and under these circumstances the patient becomes an easy prey to the ravages of the rupial affection. There is in some cases only one single specimen, as upon the nose, or the chin, or about the knee-joint. But in most instances, the eruption appears in clusters and in successive crops, and which cover a space varying from a few lines to an inch in diameter; and in some cases the crusts enclose an area of several inches in diameter. They are circular in form, and, when the ulcerated surface beneath them is exposed, it appears as if cut or scooped with a punch, and a dark-red zone encircles the sore.

The period of time during which the tubercle continues before suppuration takes place, varies in different cases. Sometimes it occurs in a few days; at other times it is delayed to several weeks or even months, as if the morbid process during all this interval was suspended or at rest. It is seldom that much pain is experienced from them, or that the periosteum or bone is affected, unless the ulcer is situated where the integument is thin, as upon the scalp or the front of the tibia. The character of the ulcers differs somewhat according to the length of time they have been covered by the crusts. Sometimes they are shallow, with a smooth, shining surface; sometimes quite deep, with a slough at their base, and the ulcerative action works its way beneath the skin for quite a distance beyond the apparent limits of the sores. When the disease attacks the nose, it occasionally destroys a considerable portion of the alæ and

adjacent parts, which are covered by the thick incrustations before the full extent of the mischief is scarcely suspected. When the crusts have been removed, the ulcerated surfaces are apt to bleed upon the slightest touch in dressing them, unless this is done in the most delicate manner.

The discharge is rarely pure pus, but an admixture of sero-sanguineous fluid, with more or less purulent matter. In very mild cases, the ulcers have been known to heal in a few days, but this is the exception to the general rule. New incrustations are formed every few weeks by the drying up of the secretion upon the surface of the ulcer; and thus a succession of crusts is kept up for a long time. These crusts are thicker in the middle than at the circumference, and, when large, they have not inaptly been compared to an oyster-shell or limpet-shell. When the ulcers finally heal, they leave behind them a dark-brown stain or lividity of the skin, which remains for many months before it is entirely effaced.

Rupia Prominens derives its name from the fact that it projects out from the skin on which it is seated to a greater or less extent—varying from two or three lines to more than a whole inch, and the same in diameter. The eruption is developed upon the face, the trunk of the body, and the extremities. In a majority of subjects, the tubercles are few in number, but large; the secretion is usually abundant, thick and black; hence the crusts are particularly large, well-marked, conical, and prominent, as the name sufficiently indicates. They increase in size by the process of accretion, which takes place at the base, in consequence of the slow successive effusions of the bloody, sero-purulent matter which raises the cuticle and desiccates in concentric layers or rings; and thus the incrustation augments, both in circumference and length, so that the portion which was at first the base of the cone becomes at last its apex. The cone itself is hollow. The largest specimens, if left undisturbed, usually appear on the integument covering the side of the chin. They are deeply set and generally very adherent. There is always a delicate red erythematous band or areola encircling the margin of the ulcer. Sometimes the eruption is confined to one locality, as the forehead, the inner aspect of the knees, or the thighs immediately above the knees, the wrists, or about the elbow-joints. In other instances, and where the pyogenic diathesis has existed for a long

period, these formations arise in great profusion, almost entirely covering the face, neck, arms and legs; and in one instance within our observation, all the joints of the thumb and fingers of both hands were occupied by them.

Where the general health of the patient is greatly impaired, as, for instance, from a long protracted duration of constitutional syphilis, it is no uncommon thing to find a series of these productions in every stage of their development—some at their maturity, some on the decline, and some just beginning to appear.

The *diagnosis* of rupia is rarely attended with any difficulty. It is true, as has already been seen, that it possesses many features in common with ecthyma, and this is the only cutaneous affection to which it sustains a very near resemblance. And as regards the treatment, no practical disadvantage can arise, whether the practitioner should consider a given case as an ecthyma or rupia.

We have seen, also, that the eruption now under review is produced by great constitutional debility, and that the chief cause of this debility, in a great majority of instances, is constitutional syphilis.

Treatment of Rupia.—In all forms and stages of the disease, the constitutional treatment is of the greatest importance. Debility is always a predominant symptom, and we may at once commence with tonics. In young subjects, the syrup of the iodide of iron, in doses adapted to the age of the patient, is appropriate; and the tincture of the chloride of iron, in syrup of ginger and water, the iodide of potassium, quinine, and cod-liver oil, will also be requisite as remedial agents in restoring the patient to a comfortable state of health. The advantages of nutritious food, warm clothing, good air, cleanliness, are not to be forgotten or omitted at any time during the administration of medicines.

With regard to local measures, the first thing to be accomplished is the removal of the scabs. Poultices, fomentations and warm alkaline baths will accomplish this; and the exposed ulcerated surfaces are at once to be dressed with stimulating applications. These may consist either of lotions or ointments. Of the former, the black wash, the yellow wash, a solution of the chlorate of potash of varied strength, a solution of the tartrate of iron and potassium, six or eight grains to the ounce of water, should be used. These are all

stimulating in their action upon the indolent ulcers, and are suited to patients of any age. In some cases, where the diseased surface is very extensive and the foregoing applications fail to produce the desired improvement, the ulcer may be touched with either of the following lotions:—℞. Hydrarg. pernitratis, ʒ ss.; aquæ fontanæ, ʒ iij. M. To be applied lightly every day by means of a soft camel's-hair pencil. Or a saturated solution of the nitrate of potash may be used twice a day upon the most indolent sores, which may be covered afterwards with an ointment of the nitric oxide of mercury—one scruple to the ounce of simple cerate. No ointment is superior to this for general use. A slight sprinkling of pulverized chlorate of potash upon the ulcers every day for a few times will often bring forward healthy granulations. A like effect will also be produced by cream of tartar used in the same way.

The general and local treatment for adults is to be conducted, of course, on the same principles as for younger subjects; the only difference required being in the more energetic style or method as regards both constitutional and topical remedies.

Lupus.

What is lupus? In looking over the works of the ancient writers, it is interesting to observe the figurative language they often employ to illustrate their ideas of the forms or the peculiar characteristics of the diseases that attack the human system. In the present instance the symbol chosen is one of the most ferocious wild beasts that roam in field or forest, and whose very name is suggestive of destruction; and destruction being the salient feature of lupus, a more appropriate similitude could not be selected.

The disease is confined to no age or sex, or class of subjects. It presents three principal varieties—namely, lupus erythematodes, lupus non-exedens, and lupus exedens. Other varieties are mentioned by different authors, as lupus vulgaris, lupus vorax, and lupus hypertrophica, the latter originally described by Bietl. All these forms are but different degrees or stages of the same disease.

The general health usually remains unimpaired, even where the local affection continues for ten, twenty or thirty years. There is a

tissue-change which supervenes upon the local inflammation, and this change, together with loss of substance unlike what takes place in any other cutaneous disease, constitutes a distinguishing attribute of the complaint.

In the first variety which we propose to consider, there is an erythematous condition of the skin, followed by loss of substance or atrophy in the affected part, without the formation of tubercles or ulceration.

In the second variety there is a development of tubercles, followed by destruction of tissue *without* ulceration.

In the third, there is the formation of tubercles and subsequent loss or destruction of the skin, and sometimes of the deeper tissues also, *by* ulceration. Thus we have before us the distinctive features of the several forms of lupus. In each there is a devastating agency at work, although there is a diversity in the mode of operation. The disease is never contagious, and rarely traceable to hereditary predisposition. The most frequent locality for its development is the face, especially the nose. No constitutional symptoms are present, and rarely any pain. It sometimes happens that while the eruption occupies the face, nose or head, the fingers or back of the hands, or some other distant part, may present a similar morbid affection. It commonly appears in well-marked round or oval discs of deep-red color. When it breaks out on the ears, it generally commences on the posterior aspect, near the junction of the lobes with the lower point of the cartilage. Here it remains partially concealed as a small red patch, not unlike a mosquito-bite, and attracts little or no attention, perhaps, for several months, by which time it will have crept upward along the posterior surface of the whole ear, which becomes thickened and preternaturally red; and occasionally the patient experiences a slight sensation of burning and pruritus, and at a little latter period cannot allow that side of the head to rest on the pillow, or the hat or bonnet to be pressed against it, on account of the discomfort arising from increased heat. Occasionally, erythematous patches are developed nearly simultaneously on the nose, ears, cheeks, forehead and upper lip, and on the mucous lining of the mouth and nose. In a few weeks, or perhaps months, a thin, white, delicate scale forms on the diseased surface, as in psoriasis. It is very adherent, although it desquamates every now and then in the form of a horny layer.

When the morbid action has continued for a long period, the diseased integument is atrophied, puckered and depressed, and is much thinner than natural on account of interstitial absorption, and not by open ulceration. If the fingers are the parts involved, the redness and tumefaction which have so long existed subside, and the skin is reduced to a white, hard and horny covering, and seems drawn tightly around the bones, like a smooth clasp. And so with the back of the hand of a lady whom we once saw, and on whose left hand the complaint had lingered from the age of 5 to 35 years. The whole surface was perfectly bloodless, and white and polished as parian marble. The disorganized skin was sealed down firmly to the carpal bones, and the ring and little finger were bent immovably upon the palm; the parts thus disfigured seemed at first view to have suffered from the effects of a severe scald or burn. This patient had been afflicted also, for some eight or ten years, with lupus non-exedens on the nose.

When the disease attacks the cheeks or nose, the inflammation, induration and hypertrophy of the affected part produce great deformity. There is a sort of knobby or lobulated appearance occasioned by the development of tubercles, which sometimes increase in numbers with great rapidity and coalesce. As the morbid processes begin to decline and the disease advances towards a cure, the redness and swelling gradually subside, and the skin assumes a smooth, shining appearance; there is loss of substance, and the portion of integument which was the seat of the lupoid action sinks below the plane of the adjacent surface. And if the nose is the unfortunate organ on which the malady plants itself, it looks sharpened or notched, as if the soft parts had been pinched or irregularly pared off, the bones and cartilages become prominent, and a remarkable cicatrix and deformity remain, which no surgical operation can repair.

In some cases there is, for a very long period, repeated exfoliation of thin, white, dry, laminated scales from the cicatrized surface after every other morbid process has ceased. (This is the scrofulide érythémateuse of Hardy.)

Lupus non-exedens.—This generally commences at an early period of life, and is usually represented by the development of a few distinct tubercles, varying in size from a pin's head to that of a pea; they are slightly flattened on their summits, somewhat elastic and boggy to the touch, and if pressed or broken with a probe, or other-

wise disturbed, they readily bleed. They often remain in a dormant state for months or even years without producing any inconvenience to the patient, except as regards looks; and show no disposition to increase until, perhaps, their activity is awakened by some unappreciable cause or circumstance, when they suddenly enlarge at the circumference and multiply in number, and thus by their aggregation and fusion they form a well-defined patch of a pale, dull-red or mottled color of various extent, and circular, oval or tortuous in outline. At length the patch is covered with scales or crusts—somewhat like those seen in eczema. These are adherent in their centre to the summit of the tubercles or nodules, while their edges are free and curled up. Cuticular desquamation, however, takes place, and is renewed at different intervals.

The disease seems to have a preference to some portion of the face, and the nose is by far its most frequent habitat. It sometimes attacks the back and extremities, especially the lower. Sometimes the morbid action commences on the upper lip, which soon becomes excessively tumefied, and gives rise to great disfigurement. The lower lip is very seldom the seat of the disease. The central portion of the patch often heals, and the cicatrix is decidedly lower than the peripheral portion, which is studded over with a ringlet of tubercles. These coalesce, and form, as it were, a separating wall between the morbid and healthy skin. The area of the diseased action enlarges very slowly, and if seated on the integument covering the ossa nasi, the process of expansion, which usually extends in nearly equal ratio in all directions, encroaches on the lower eyelid. Eversion takes place from the contraction of the integument, and the mucous surface of the conjunctiva is exposed to the attrition of the air; and there is a constant flow of secretion, greatly to the annoyance of the patient. Laterally, the complaint advances far down upon the cheeks; meanwhile the process of healing is going on in the central part, which clears away and cicatrizes, but without true ulceration. There is loss of substance by absorption, and the thin skin is slightly puckered and very adherent to the bones. Its sensibility is much enfeebled or totally lost, and it never regains its original appearance or resiliency. When the devastations are completed, the individual often presents a most unique and hideous deformity. Nearly the whole of the cheeks, lips and chin is sooner or later covered with a succession of fresh tubercles, which run toge-

ther, and the patient looks as if his face was covered with a mask. This is the lupus with hypertrophy of Biett. It is often developed in connection with the erythematous variety, or with a lupoid ulceration of the mucous membrane within the buccal cavity or the nasal fossæ. In some instances, the disease commences in the latter region and produces at first a simple redness on the external integument, with slight thickening of the alæ, while it eats its way through the cartilaginous septum and higher up in the direction of the turbinated bones. Such is the strange and fitful course pursued by this complaint in very many cases.

Lupus exedens.—This form of lupus is more frequently met with than any other. It commences by the development of one or more tubercular masses, which are characterized by greater hardness and density in their structure, and less transparency than are present in those of lupus non-exedens. Their tendency to ulceration becomes apparent at an early day, and progresses with marked activity in many instances, while in other cases its march is very slow. When the former tendency prevails and the complaint attacks the nose, this organ is sometimes entirely destroyed in four or five weeks. The soft parts, the cartilaginous structure, and sometimes the osseous, are swept away by this peculiar process of destruction in spite of all efforts to arrest its voracity.

The disease may attack other portions of the surface at the same time that it affects the nasal organ—as the entire scalp or face, the back of the neck, between the shoulders, on the hands, fingers, toes, &c., and may proceed to the destruction of all the soft tissues that lie within its path; and in some instances not sparing even the bones.

Ordinarily, the disease, commencing as a small, hard tubercle, remains nearly quiescent for some considerable time, and then passes into a suppurative stage and is soon covered with a thin greenish-brown scab, and remains, perhaps, circumscribed to a single spot. Other tubercles appear in the immediate vicinity at various periods, and undergo the same changes. The patient picks off the soft and yielding crusts, beneath which a light yellowish fluid may be concealed, and when this is wiped away an excavated ulcer, more or less deep, may be exposed to view; or, instead of any secretion, a red pulpy surface may be left, which bleeds on the slightest touch. This ulcer becomes concealed by the formation of another scab larger than the first, and formed by the drying up of the semi-purulent or fœtid, ichorous matter poured out upon the diseased surface.

The surface of the ulcer of lupus exedens is ragged, the edges thick and red, covered with a white exudation of lymph and with small, unhealthy granulations. There is a frequent attempt at cicatrization, which may and does take place to some extent; but the sore, once established, does not readily close. It may give promise of being healed soon, when all at once the ulcerative process seems to have acquired a fresh impulse.

However severe and extensive the ravages of lupus exedens may be, it is seldom that any pain is experienced during the whole course of the malady, and in this particular, as well as in many others, it resembles constitutional syphilis. Sometimes there is itching in the part, especially towards night, and after certain articles of food have been taken; and in sudden changes of weather the patient experiences a temporary uneasiness, but scarcely amounting to absolute pain.

When the ulcer of this variety of lupus heals, the resulting cicatrix is of a pearly white, with streaks of a faint purplish tint, and corrugated bands running over it, as mentioned in connection with the previous disease. It is no uncommon event for the complaint to break out afresh at some future day at some point within or near the boundaries of this cicatrix, whatever line of local or constitutional treatment may have been adopted.

The consequences of lupus exedens vary with the part on which it is situated and the period at which it is subdued by treatment. If seated on the nose and cured early, a slightly notched scar remains, and the tip of the organ is pointed and irregular. If on the cheek or ear, and has been cured before it spread extensively, the remaining scar does not occasion much deformity. These unimportant blemishes, however, are rare compared with the more frequent and frightful deformities which the malady generally produces, especially if of a syphilitic origin. In such cases it owes its terrible severity and consequences to the superaddition of a specific poison that pervades the constitution. It may attack the forehead or nose, and appear simultaneously on the extremities, the front of the neck, the buttocks, or elsewhere on the trunk of the body, in the guise of what are called serpiginous ulcerations. The skin suffers first and generally the most; the cartilages come next, and finally the osseous framework of the nose and roof of the mouth are swept away.

Lupus is little liable to be confounded with any other disease that invades the skin. The tubercles, which are its earliest representa-

tives, are of a livid, dull red color, pursue an indolent course and are usually confined to one spot or district, as the nose, lips, cheeks, ears, &c. Sometimes the complaint commences as a single tubercle. At a variable period the tubercles pass into a state of ulceration. This ulcerative process soon spreads beyond the limits of the original tubercles. Slight, scaly crusts are formed. These are quite adherent, but break down easily from trifling pressure. At length attempts are made at repair in the shape of unhealthy-looking cicatrices. The complaint is unaccompanied by any constitutional symptoms of the slightest importance. These are pathognomonic features.

Pathology.—In regard to the new-formation of connective tissue which constitutes the essence of the disease, Wedl states as the results of his investigations that it is at first very limited in extent, and accompanied with injection of the vessels and tumefaction. It gradually extends, and produces a consecutive atrophy of the organs in which it spreads. In the *cutis* the hair falls out, and the sebaceous glands and *papillæ* shrink; in a word the cicatriform, smooth aspect of the skin, above noticed, is produced. In this atrophied condition the latter is ultimately perforated by the new growths. A cicatriform contraction, moreover, may remain at one spot, whilst the perforation of the skin takes place at another. The new-formation of connective tissue may, also, extend into the adipose and muscular tissues, or so far even, as to affect the bones themselves, and to interfere with the nutrition of the elementary organs, which become as it were supplanted by the new-formation, but not dissolved. The new connective tissue may suffer involution in many places, where the conditions for its further development are wanting; but it is not subject to any genuine or spontaneous, retrograde metamorphosis, accompanied by a softening of the new-formed substance. The *pus* which is so commonly formed in *lupus*, should by no means be regarded, as it has been, more especially by the older writers, as a product of the breaking up of the newly organized substance, or of the normal elements of the tissue; a view, which, according to opinions at present received, must be wholly rejected, inasmuch as the pus is itself a new formation out of a *blastema*, which, in the present case, as in many other instances, is associated with the new-formation of connective tissue.

Causes.—Syphilis is one of the most frequent causes of this com-

plaint, although many individuals who are afflicted with lupus, furnish no evidence in their history that their disease is in any way or degree derived from the venereal taint. Scrofula is named by various authors as the parent of lupus; and yet a scrofulous taint in the system is a myth in the opinion of many able writers. If we admit its agency in the production of lupus we must do so on a purely hypothetical basis.

Lupus is much more common in women than in men; and this fact, in our judgment, seems to take away all foundation for the theory in regard to the ideal relationship between lupus and scrofula.

The influence of sex and age is very marked as among the predisposing causes of the several varieties of lupus. Of 170 cases collected and reported by Mr. Naylor,* Assistant Surgeon to the Hospital for Diseases of the Skin in London, during the years 1861, 1862, and 1863, 131 were females and 39 males. These figures represent lupus in the aggregate only, a much greater difference being noted in some of its varieties. Thus in lupus exedens the ratio is 5 to 1 between the two sexes, and higher yet in the two other varieties. Lupus exedens as a rule is developed primarily between the ages of 10 and 30, becoming more rare after the latter period, and seldom commencing before the seventh year.

Lupus arising from syphilis takes a wide range in its period of development, beginning as early as the fourth or fifth month and as late as the seventieth year and upwards. Lupus is not specially influenced by occupation, or locality. We have known quite a number of cases following the receipt of some slight injury to the part as the immediate cause of the complaint; as a blow, a scratch, a spark of hot cinders, &c., impinging on the site where the tubercle appeared soon after the accident.

There is another fact connected with the etiology of the disease which is difficult of solution, and that is, that it is seldom seen in the upper classes of society. Is the disparity due to a better quality of food, better air, greater cleanliness, or is it not influenced by these circumstances? The affirmative would seem to be the true answer.

The prognosis is not always very satisfactory. In recent cases, or those of quite limited extent, the prospect of permanent recovery is encouraging; but in cases where the morbid habit has existed for

* Diseases of the Skin, by George Naylor, F. R. C. S., London: 1866; p. 165,

years and spread over a large field, great assiduity, care and skill are requisite to accomplish a cure of the existing evil; and when this is effected the probabilities are pretty nearly balanced as to whether or not the malady will reappear at some future day. This contingency, however, affords no reason for the neglect or omission of any remedial measures which in the judgment of the medical adviser the case demands.

Treatment.—There is no specific course to be pursued either as regards constitutional or local remedies. We must be governed by general principles of medical science. The health of the patient rarely ever suffers from any of the varieties of lupus, except it be from constitutional syphilis. If the latter evil is engrafted into the system the lupoid development is to be considered in connection with the constitutional malady and "part and parcel of it;" and all internal remedies must be selected from among those which are in best repute for secondary or tertiary syphilis, as the case may be. The patient should be under the best hygienic influences at all times.

Arsenical preparations have often been administered for the cure of lupus, but no well-authenticated reports in favor of them have been recorded in medical or surgical works, and it is but just to remark of them that they possess no claim to confidence in the disease under consideration. Mr. Wilson is inclined to recommend Donovan's solution in doses of ten or fifteen drops three times a day at meal time. Few patients can tolerate this amount of the solution for any length of time. We so judge from frequent reports from them, and we have ceased to prescribe it in any quantity. In its stead we prefer very small doses of the bichloride of mercury—say the tenth of a grain morning and evening. It should be taken with meals, in the form of pill, or solution with the compound tincture of cinchona, or compound tincture of cardamom. The cod liver oil is just now a popular article in lupus. The daily quantity recommended by different surgeons ranges from half an ounce to one or two pints!

Nitric acid, nitro-muriatic acid, the various chalybeates, the iodide of potassium, the chloride and carbonate of ammonia, and an unlimited number of mineral waters—all have their advocates. Whatever course of constitutional treatment, in the judgment of an intelligent physician, may be indicated with a view to restore or preserve

the integrity of the several vital organs and their functions, will be the proper one. And it will be labor lost if he looks here or there after specifics.

The local treatment must be our main reliance; and with this there will be need of long and patient perseverance in a majority of cases.

In erythematous lupus, if the efflorescence is quite limited, one of the best local applications to commence with is a compound tincture of iodine of the following strength:—℞. Potassii iodidi, ʒ ijss.; iodinii, ℈ ij.; Aquæ fontanæ, ʒ j. M. A portion of this is to be applied twice a day for two or three days by means of a camel hair pencil. By this procedure the cuticle will be completely detached, and when this takes place the raw surface is to be covered with lint saturated with liquor plumbi diluted with an equal quantity of water. If the diseased surface is very extensive it may not be advisable to remove the cuticle from the entire patch at one time. The nitric acid very much diluted may be substituted for the lead wash if no benefit results from the use of the latter. If there is severe pain or smarting at any time, a lotion containing prussic acid can be employed with advantage in connection with a solution of the borate of soda. Generally speaking there is more discomfort experienced by the patient towards evening or a little later in the day than at any other time, from the smarting and burning. At such times the subjoined formula for a lotion should be ordered: ℞. Sodæ sub-boratis, ʒ ij.; acidi hydrocyanici diluti, ʒ ij. M. *Lotion.* Rags saturated with this may be applied to the lupoid surface.

The benzoated oxide of zinc ointment, with three grains of sulphate of morphia to each ounce, is likewise a suitable ingredient with which to dress the parts.

If the scales are very thick they can usually be detached readily by means of a strong solution of potassa fusa, or the carbonate of soda, and afterwards the raw surface is to be dressed with the lead water, or either of the other agents above mentioned. By these means the disease will often abate in severity. Other local measures are worthy of a trial also: such as the iodide of sulphur ointment, 15 grains to the ounce of rose ointment; the iodide of mercury ointment, one scruple to the ounce, to be applied every day or every other day; or the iodide of lead ointment, one drachm to the ounce. This last may be applied constantly.

Lupus non exedens.—The tubercles of this variety of the malady can be destroyed by means of several kinds of caustic, and a healthy action excited. Squibb's "argenti nitras fusus," strong nitric acid, the acid nitrate of mercury, the chloride of zinc and the potassa fusa, are about the only ones that the surgeon need employ. Squibb's preparation of the nitrate of silver is cast into sticks about an inch in length and sharply pointed at one end. These sticks, or "points" as they are familiarly called, do not usually break very readily. They contain five per cent of chloride of silver superadded to the composition of the ordinary nitrate of silver—hence their hardness and superiority. Another advantage is that they always keep pointed while using them.

If the tubercles are situated on the cheeks, on the bridge of the nose, or the scalp, and the diseased structure is soft and boggy, the nitrate of silver points can be employed to plough through as it were the entire mass of tubercular formations, and thoroughly and effectually break them down so that they may not re-appear. If the complaint is very extensive, only a part should be attacked at any one time.

If the alæ nasi are to be treated, the nitrate of silver may not be the most suitable. It is somewhat inconvenient and a little difficult to employ it in this locality on account of the yielding and moving about of the parts when pressed upon with the force requisite to break down the tubercles. The pernitrate of mercury or the chloride of zinc perhaps will be found more convenient and equally effectual. The pain produced is about equal, whichever of the two is employed.

If the tubercles are situated on the ear, the silver can be passed directly through the whole mass and thoroughly break it up. There is generally quite free bleeding, and no small portion of the nitrate is mingled with the blood and wasted without coming in contact with the morbid growths.

After the application of the caustic the surface is to be washed thoroughly in cold water, and water dressing used. Sometimes the ear thus operated upon swells enormously, and it is well to apprise the patient that considerable inflammation will supervene on the use of any caustic agent, whatever it may be. A warm soft poultice will now be required. In five or six days a slough will be detached, and a raw surface with a more or less healthy aspect will be brought to view. The repetition of a caustic may again be needed; but instead of the silver a thin coating of the chloride of zinc, or nitric acid, or the pernitrate of mercury, no matter which, will be followed by the development of healthy granulations with more certainty than would attend the employment of the former caustic. The base of the lupoid surface is in an atonic condition, and the application of the silver is

of less promise than either of the other three just mentioned. For the rapid and certain destruction of the tubercular masses the nitrate of silver is the most efficient weapon, and here ends its superiority. Very likely other tubercles will spring up at some point in close proximity to the previous ones, in which case the silver will again be called for.

Sometimes when this variety of lupus is situated on one of the fingers or on the back of the hand of a hard laboring man—a fisherman, a blacksmith, a shoemaker or farmer—there will be a few tubercles present while other portions of the skin will be thickened with an unorganized mass of papillæ, or dry, hard, horny spines, closely crowded together and sticking out above the adjacent skin perhaps the tenth of an inch. These cases occur, but they are rare, and exceedingly slow in their growth. The best local application to these patches is the potassa fusa; and several days will be required for the action of this caustic to work its way down to the derma. When this is reached and the *debris* is removed, the exposed surface should be touched with a delicate coating of the chloride of zinc or acid nitrate of mercury or nitric acid. The tubercles are, as in all other instances and places, to be destroyed with the nitrate of silver points.

If the hypertrophied patch should be free from irritation and at the same time considerable cuticular desquamation overspreads the surface, acetic acid, diluted with two parts of water, will be found a suitable application.

The foregoing is about all the treatment which lupus non exedens admits of, wherever it may be situated.

Although success may for a time attend our efforts in reducing the disease to the lowest point possible, it will be well to apprise the patient that the tubercles will be very likely to re-appear; for the history of lupus abundantly proves that there is no variety which shows so frequent tendency to recur as the tubercular, and it is rarely in the power of medicine or surgery to destroy this tendency.

Sometimes the patient suffers from an attack of erysipelas during treatment, especially if the face is the part diseased. This occurrence has been known to act as a healing process to the lupoid affection and apparently to diminish the chances of a recurrence.

In the local treatment of *lupus exedens*, the first step is to clear away any scabs or incrustations that may have formed; then wipe away the ichorous or purulent deposit or blood that lies upon the ulcerated surface, which may then be touched with a sharp caustic. Various caustics have been recommended and have proved efficient in different hands. Hebra is partial to the nitrate of silver. In recent cases of small extent, or when the granulations are soft and readily

broken down, this caustic is sufficient to accomplish the object desired; or when solitary tubercles spring up within the area or just outside of the diseased surface, as they are very apt to do, the silver is well suited to accomplish their destruction, which will very likely be followed by the healing up of the part which was the site of the tubercle. But where the surface is free from tubercles or the remains of tubercles, and is simply a lupoid ulcer, the nitrate of silver has proved, in my experience, less effectual than the acid nitrate of mercury or the chloride of zinc. Generally, this lupoid surface is seen dotted over with very minute granular bodies, as if a process of healthy granulations had been commenced, but arrested in their development. Such a surface is quite hard to the touch, much more so than a normal healthy granulating surface, and if an attempt be made to reach the bottom of this morbid growth with the silver, it is apt to be a failure. A thin slough is produced; but in five or six days the surface which yielded it will present an appearance identical with that exhibited before the application of the caustic in question. This mode of procedure, of course, is quite ineffectual, however long continued. Nothing like the desired recuperative action is excited. With the acid nitrate of mercury, or the chloride of zinc, the depth to which they can be made to reach is almost unlimited; and yet their judicious application is free from danger, although not free from pain. If a large surface is diseased, only a small part should be subjected to the caustic at any one time. In two or three days, another section should be treated in like manner, and so on as fast and as far as the patient can tolerate. If the zinc is used, it should be in a state of perfect deliquescence. It is then of about the consistence of glycerine, and is to be applied with a camel-hair brush. Some writers advise that it be made into a paste with flour and glycerine; but when thus mixed it runs in every direction when applied to the skin, to say nothing of its comparative weakness in consequence of its union with the other two inert substances.

If the acid nitrate of mercury is selected, it is to be applied with a camel-hair brush, in the same manner as the chloride of zinc. If the strong nitric acid is preferred, it is to be made into a paste with sublimed sulphur, and applied by means of a glass rod or a wooden spatula, and may be allowed to dry on the part.

After the caustic is applied, the part is to be coated over with collodion. This dries at once, and serves to mitigate the pain. Nothing by way of interfering with the eschar should be allowed.

Hydrargyri Iodidum Rubrum.—M. Cazenave considered this the best topical application that could be employed in lupus. He used it in thin layers every six or eight days to small portions of the dis-

eased surface at a time, in the form of a caustic ointment, made of equal parts of the iodide, oil and lard. Dr. Tilbury Fox, of London, in his valuable Treatise on Skin Diseases, regards the biniodide as superior to any other external application in bad cases of lupus. His formula is:—℞. Hydrargyri biniodidi, ʒi.; glycerinæ, ʒi. M. I have tried this last prescription in three cases of lupous ulceration. It improved the condition of the affected parts, and in a few weeks cicatrization took place in a satisfactory manner. The action produced by it appeared to be quite similar in these cases to that of the chloride of zinc and the liquor hydrargyri pernitratis.

Thus it will be seen that a variety of remedies have been tried, and have had their advocates from time to time, in the treatment of the malady under consideration. In some instances, the lesion is perfectly cured in a few weeks, and never returns; in others, the success is only apparent, for in a few weeks or few months, the abnormal action reappears, the patient exhibits unmistakable signs of a depressed vitality and vitiated condition of the blood; and, notwithstanding the most judicious efforts put forth for his recovery, the disease advances slowly to a fatal termination.